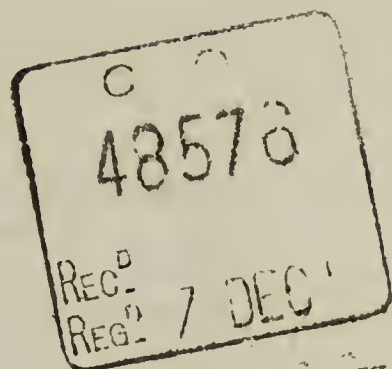


1 Jan. 1915.



## STRAITS SETTLEMENTS.

### The Straits Settlements Medical Report for the Year 1913.

1. *Population and Health.*—The following table shows the estimated population and the birth and death-rates for the years 1912 and 1913:—

SETTLEMENT.	Estimated mean Population.		Births No.		Deaths No.		Birth Ratio per mille.		Death Ratio per mille.	
	1912.	1913.	1912.	1913.	1912.	1913.	1912.	1913.	1912.	1913.
Singapore ...	312,028	320,984	7,041	7,248	13,096	11,327	22'57	22'58	41'97	35'29
Labuan ...	6,634	6,706	211	216	125	144	31'80	32'21	18'84	21'47
Penang ...	143,236	144,252	3,766	3,783	4,954	5,069	26'29	26'22	34'59	35'14
Province Wellesley	130,803	131,910	4,456	3,957	3,679	3,775	34'06	30'00	28'13	28'62
Dindings ...	8,137	8,403	235	254	294	302	28'89	30'23	36'13	35'94
Malacca ...	127,797	130,755	4,885	4,506	6,274	5,333	38'22	34'46	49'09	40'78
Total ...	728,635	743,010	20,594	19,964	28,422	25,950	28'26	26'87	39'01	34'93

The figures for the European population are:—

	Estimated mean Population.		Births No.		Deaths No.		Birth Ratio per mille.		Death Ratio per mille.	
	1912.	1913.	1912.	1913.	1912.	1913.	1912.	1913.	1912.	1913.
Straits Settlements.	7,500	7,685	181	161	93	64	24'13	20'95	12'40	8'33

2. The population at the last Census 1911 was 711,951 and is estimated at 743,010 for 1913.

3. These figures are based on previous Census figures calculated by geometrical progression. The reasons for so doing have been stated in previous reports.

4. *Births.*—The births registered during the year numbered 19,964 and were equal to a rate of 26'87 per 1,000 persons living. This rate is lower by 1'39 than that recorded in the previous year and higher by '04 than the average for the ten years 1903–1912.

5. *Deaths.*—The deaths from all causes registered in 1913 numbered 25,950, and correspond to a death-rate of 34'93 per 1,000 of population, compared with 39'01 per mille in 1912 and 46'46 in 1911. The average for the ten years 1903–1912 was 40'34 per mille of population. As usual the largest number of deaths was due to malaria (2,878) and “fever unspecified” (4,746).

The attached chart shows the weekly incidence of deaths from malaria, beri-beri, phthisis and dysentery for the Settlement of Singapore and may be of interest.

The death-rate after eliminating those dying within 3 months of residence in the Colony and those dying at Quarantine Stations is 32'74 per mille.

6. The infantile mortality rate, calculated on the birth-rate, excluding those dying who were born outside the Colony, was 271'34 as compared with 267'21 per mille in 1912 and 270'47 in 1911. The deaths of infants within 8 days of birth, in Singapore alone, was ascertained to be 401 out of a total of 5,813. This high rate is

not being lost sight of and the training of native midwives is being pushed forward as quickly as possible with the view of bringing in a Midwives Ordinance in the near future. Unqualified midwives and the ignorance of the mothers, especially as to the proper feeding of infants, is largely responsible for the existing conditions.

7. The following table gives the number of cases of zymotic diseases occurring in the Colony during 1912 and 1913, excluding imported cases:—

SETTLEMENT.	PLAGUE.				CHOLERA.				SMALL-POX.			
	1912.		1913.		1912.		1913.		1912.		1913.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Singapore ...	37	33	1	1	128	115	102	83	70	39	23	7
Penang ...	...	...	...	...	...	...	2	2	6	1	15	3
Dindings ...	...	...	...	...	...	...	...	...	...	...	67	16
Province Wellesley...	...	...	...	...	3	2	...	...	2	2	11	1
Malacca ...	...	...	...	...	2	2	...	...	46	15	...	...
Labuan ...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	37	33	1	1	133	119	104	85	124	57	116	27

8. *Plague*.—The only case of plague occurred in Singapore in an adult Chinese a new arrival from Johore. The case ended fatally.

9. *Cholera*.—A small outbreak of Cholera occurred towards the end of the year originating among some immigrants from an infected port in China.

10. *Small-pox*.—Out of the 116 cases noted for the year, 67 cases occurred in the Dindings with 16 deaths and 23 in Singapore with 7 deaths.

The new Municipal "Infectious diseases Hospital" was opened on 1st May since which date all cases of plague, cholera and small-pox have been treated there. The old Government Quarantine Camp, long obsolete, was then demolished.

11. *Diphtheria*.—There were seven deaths in all from this cause, of which four occurred in Singapore and three in Penang.

12. *Enteric Fever*.—The total number of deaths from this cause was 104 as compared with 105 in 1912.

13. *Beri-beri*.—The deaths from beri-beri were 1,657, as compared with 1,926 in 1912 and 2,056 in 1911. The following table gives the deaths from beri-beri for the last five years for all the Settlements:—

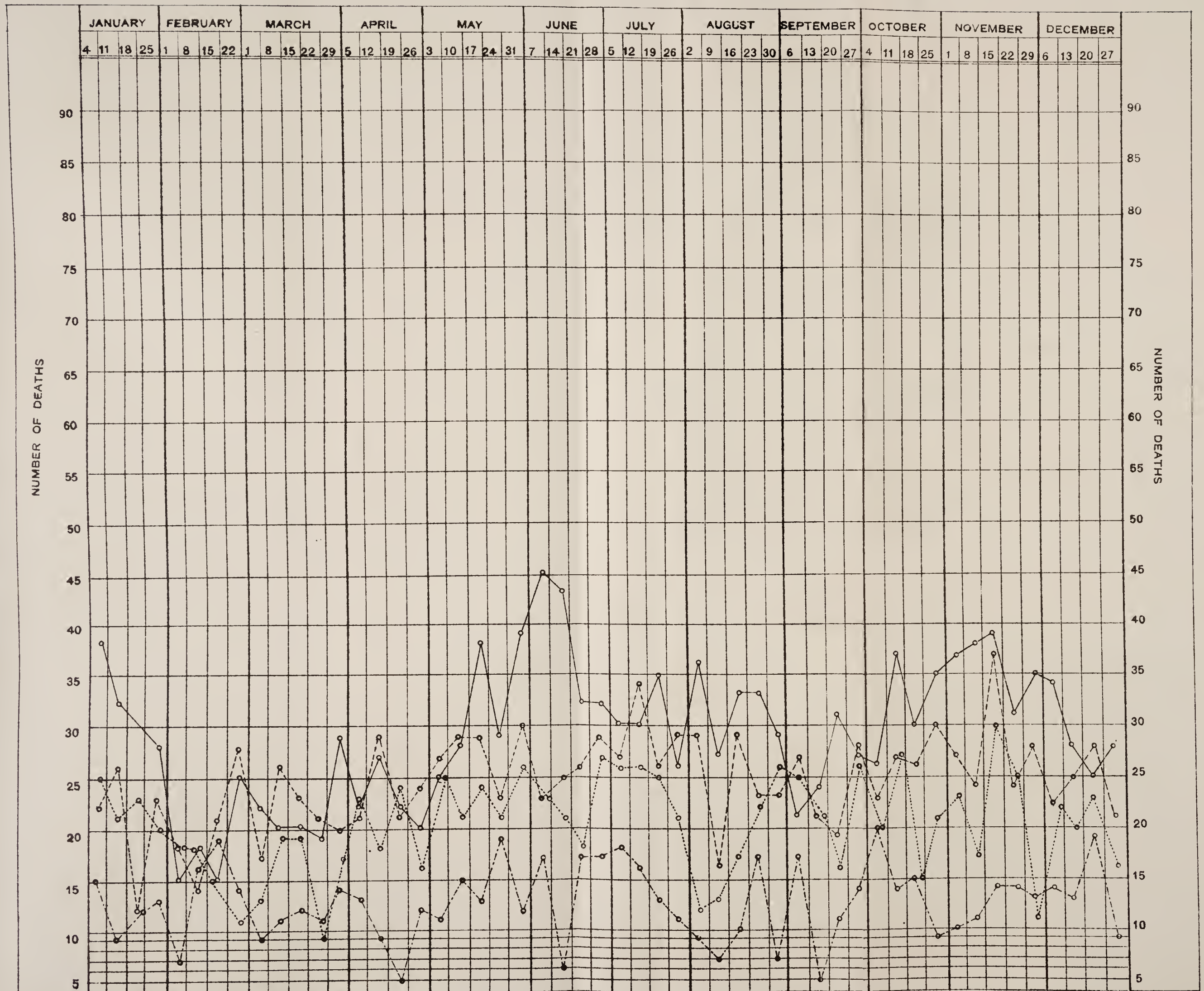
*Deaths from Beri-beri.*

Settlement.	1909.	1910.	1911.	1912.	1913.
Singapore ...	873	1,071	1,220	1,224	1,075
Penang ...	399	367	368	349	310
Province Wellesley ...	11	6	6	6	12
Dindings ...	4	7	9	...	4
Malacca ...	219	267	443	344	252
Labuan ...	...	19	10	3	4
Total ...	1,506	1,737	2,056	1,926	1,657



CHART SHEWING THE TOTAL WEEKLY DEATHS FROM MALARIA, BERI-BERI, DYSENTERY, PHTHISIS IN

SINGAPORE ISLAND FOR THE YEAR 1913



LITHO: AT THE COL: ENGINEER'S OFFICE SINGAPORE 8. 3. JULY 1914

MALARIA

BERI-BERI

DYSENTERY

PHTHISIS





The following are the number of cases of beri-beri treated in the various hospitals of the Colony for the past five years:—

*Beri-beri cases treated 1909-1913.*

<i>Year.</i>		<i>Total treated.</i>	<i>Deaths.</i>	<i>Percentage.</i>
—		—	—	—
1909	...	2,118	224	10·57
1910	...	2,044	290	14·18
1911	...	2,152	242	11·24
1912	...	2,032	293	14·41
1913	...	2,045	187	9·14

Of 253 chronic cases treated at the sea side Beri-beri Hospital but 2 died of the disease.

14. *Venereal Diseases.*—The admissions to all hospitals in 1913 were 3,038 with 50 deaths, compared with 3,318 with 39 deaths in 1912. Salvarsan is being more largely used in the treatment of syphilis and with greater experience in the selection of suitable cases has been found of inestimable advantage. One now rarely sees in the wards of our hospitals the terrible wrecks of humanity formerly so prevalent.

15. *Phthisis.*—Deaths registered from this cause numbered 2,424, against 2,582 in 1912 and 2,907 in 1911. With an increasing population this decrease is even better than it seems but some considerable time must yet elapse before marked return for past improvement in sanitation can be seen.

16. *Dysentery.*—The deaths from this cause totalled 1,016, as against 1,549 and 2,035 in 1912 and 1911 respectively.

17. *Malaria.*—The deaths from this cause numbered 2,878. There were also 4,746 deaths returned as being due to fever unspecified. No doubt many malaria cases are returned under the latter head by the Registering Officers who have to arrive at the cause of death from information obtained from relatives only. The numbers for 1912 under these two heads were 4,303 and 4,194 respectively. The admissions for malarial fever to the Hospitals of the Colony, all cases being diagnosed microscopically, were 8,102 with 499 deaths, as against 9,172 in 1912 with 660 deaths. Dr. FINLAYSON'S services were continued throughout the year in connection with the Anti-Malaria Committee and much good work has been done.

I am preparing a separate report with full details for transmission to the Home Advisory Board.

18. *Ankylostomiasis.*—The numbers treated in the hospitals of the Colony were 1,073 with 159 deaths, against 919 with 173 deaths in 1912. There were 405 admissions in Singapore and 322 in Province Wellesley. The dangers of this disease are well understood and considerable attention is being paid to the proper housing and sanitation of estate labourers by Medical Officers and by Estate doctors.

19. Hospitals and work done in all Settlements:—

Year.	Number Treated.			Number of Deaths.			Percentage of Deaths to Total Treated.		
	Europeans.	Natives.	Total.	Europeans.	Natives.	Total.	Europeans.	Natives.	Total.
1909	1,398	28,868	30,266	70	3,565	3,635	5·01	12·35	12·01
1910	1,463	34,221	35,684	64	4,465	4,529	4·37	13·05	12·69
1911	1,702	45,260	46,962	82	6,042	6,124	4·82	13·33	13·04
1912	1,794	40,420	42,214	87	4,566	4,653	4·85	11·29	11·02
1913	2,255	37,470	39,725	82	3,853	3,935	3·66	10·28	9·09

*General Hospital, Singapore.*—Electric lights and fans have been installed throughout the Hospital during the year and a new X-ray apparatus has been obtained and put up. A much needed Thresh's Disinfector has also been erected.

The native wards are to be rebuilt during the coming year as also a second up to date modern operation theatre.

*Tan Tock Seng's Hospital, Singapore.*—The number of in-patients treated at this Hospital were as follows:—

1910	...	...	...	...	...	9,978
1911	...	...	...	...	...	13,398
1912	...	...	...	...	...	13,274
1913	...	...	...	...	...	12,025

The average daily sick was 615·11 as compared with 590·10 in 1912. A new Scheme for training dressers, for whom there is a great demand, was started at this hospital towards the end of the year. An Assistant Surgeon has been appointed as tutor and a Nursing Sister is to be obtained to undertake the training in nursing. A good beginning has been made, 24 are already in training, but one short of the full number. An Examination will be held at the end of a 4 year's course and certificates of competency as qualified dressers given. A small monthly allowance is given each pupil.

*Lunatic Asylum, Singapore.*—Arrangements are being made to provide additional accommodation in the Federated Malay States Asylum for some 200 of the incurable insane from the Colony and so to relieve the existing overcrowding.

The daily average of patients in the Asylum was 455 as compared with 393 in 1912 and 358 in 1911.

*Malacca Hospitals.*—The proposed additions referred to in my previous report have not been completed yet but will be undertaken during 1914.

20. The total treated and deaths in the hospitals of the Colony for some of the more important diseases are shown in the subjoined statement with the corresponding diseases and deaths in 1912:—

Disease.	1912.		1913.	
	Total treated.	Deaths.	Total treated.	Deaths.
Malarial Fever ...	9,474	660	8,314	499
Dysentery ...	1,845	654	1,479	516
Diarrhoea ...	940	235	878	195
Beri-beri ...	2,032	293	2,045	187
Phthisis and Tuberculosis ...	1,111	564	1,014	493
Enteric ...	133	63	157	56
Ulcers ...	4,232	3	3,320	4
Venereal Diseases ...	3,522	39	3,216	50
Ankylostomiasis ...	919	173	1,073	159



The revenue collected from all hospitals and dispensaries for treatment bills is as follows:—

Settlement.	Estimated.		Actual.	
	1912.	1913.	1912.	1913.
	\$	\$	\$	\$
Singapore and Labuan ...	60,500	50,600	61,215	56,634
Penang and Province Wellesley ...	15,000	21,000	22,470	15,901
Malacca ... ..	5,500	6,000	8,275	6,972
Total ...	81,000	77,600	91,960	79,507

21. *Police Force*.—In Singapore there were 5,123 attendances of out-patients compared with 3,605 in 1912, an increase of 1,518.

Of these 664 were sent to the General Hospital for treatment, of whom 11 were Europeans. 334 recruits were examined during the year as to their fitness for service; 54 of these were rejected.

22. *Estates*.—Health Officers for Singapore, Penang and Malacca have been sanctioned for 1914 and with the advent of these officers more thorough supervision of estates and village sanitation than is at present possible will be undertaken.

An important Ordinance was passed during the year to give effect to the group hospital scheme for Malacca referred to in my last report.

23. *Out-Door Dispensaries*.—The total number of patients who attended the 12 out-door dispensaries of the Colony was 30,173 as compared with 28,533 in 1912. A second out-door dispensary in Singapore was opened on the 22nd September at Jalan Klapa, a Malay district of the town, and it is hoped that Malays will avail themselves of this opportunity of obtaining medical assistance on Western lines. A good and promising start has been made. A new out-door dispensary to be opened 2 days a week was also started in February, 1913, at Nibong Tebal, Province Wellesley, and if well attended as appears likely, a permanent Assistant Surgeon will be placed in charge in 1915.

24. *Vaccination*.—The Vaccination work within the Municipal limits of Singapore was handed over to the Municipality from the 1st October.

25. *Quarantine*.—A second disinfecting launch was added in July and fills a much needed want and a third is to be supplied to Penang in 1914. The number of passengers landed on St. John's Island, Singapore, during the year was 56,838, against 56,726 in 1912. The maximum number in residence on any one day was 4,544, against 4,329 in the previous year.

A Lay Superintendent has been appointed and will shortly be taking up duty.

At the Quarantine Anchorage, Penang, 53,937 passengers were landed as compared with 55,493 in the previous year. An European Medical Officer and a Lay Superintendent were appointed during the year.

26. *Medical School*.—The total number of students on the roll was 165 as compared with 125 in the preceding year. Ninety-six of these are for the full course. A larger number of hospital assistants are now being trained, mostly for the Federated Malay States Government Service, a few are also in training for the Kedah Government.

Dr. J. ARGYLL CAMPBELL arrived on 19th June to fill the new appointment of King EDWARD VII Professor of Physiology, created last year. An out-patient Maternity Department was started at the old Maternity Hospital in Victoria Street and a Matron was placed in charge.

The total number of students who received diplomas as Licentiates including those who passed as Hospital Assistants since the opening of the school is now 125.

An Ordinance was passed during the year authorizing the change of the name of the School to King EDWARD the VII Medical School.

27. *Pathological Department.*—Dr. W. M. SCOTT returned to Europe on 25th June, 1913, on the termination of his agreement and Dr. FINLAYSON then resumed charge of the Laboratory in addition to his other duties under the Anti-Malaria Committee.

The total number of autopsies performed was 1,289, as compared with 1,840 in 1912.

28. *Surgeons.*—During the year effect was given to the proposed appointment of 3 officers as specialists in Surgery and who should undertake no other duties. Dr. WHITTLE was appointed Surgeon to the General Hospital, Singapore, and Lecturer on Surgery to the Medical School, Dr. GRAY, Surgeon to the Penang Hospitals, and Dr. MCVAIL, Surgeon to Tan Tock Seng's Hospital. Already sufficient time has elapsed to make evident the wisdom of these appointments.

29. *Miscellaneous.*—Fifty medical practitioners were registered during the year making a total of 345 on the Register on 31st December, 1913.

Eighty-four licences were issued to medical practitioners, chemists and dentists under the Deleterious Drugs Ordinance.

Sixty-three licences were issued under the Poisons Ordinance.

An Ordinance was passed governing the licensing of dentists.

A study of the mosquitos of the Colony especially in the neighbourhood of the ports and more especially as to the incidence of *Stegomyia Fasciata* and *Scutellaris* has been taken in hand at the request of the Home authorities in view of the opening of the Panama Canal and the possible introduction of Yellow Fever. Work on these points is progressing and a first report will shortly be ready to send to Europe.

A revised and improved salary Scheme for Medical Officers has received the assent of the Secretary of State.

An altered scale of charges for the European Hospitals in Singapore and Penang was introduced during the year.

30. *Staff.*—Dr. R. DANE, Senior Medical Officer in Penang, proceeded on leave on 11th October, 1913, and Dr. W. S. SHEPPARD took over his duties from that date.

Dr. G. E. BROOKE returned from leave on the 16th November and resumed charge of the Port Health Office and Dr. A. MATHIESON reverted to his appointment as Assistant Port Health Officer.

Dr. E. DENIS WHITTLE was appointed Surgeon to the Singapore Hospitals from the 14th October on his return from leave and Dr. J. GRAY was transferred to Penang from that date to fill the appointment of Surgeon in Penang.

Dr. J. S. WEBSTER proceeded on leave on 6th September and Dr. R. D. FITZGERALD took over the duties of Medical Officer, Province Wellesley.

Dr. A. H. KEUN proceeded on leave on 20th October, and Dr. W. A. TAYLOR relieved him as Medical Officer, Malacca, on the 16th October, 1913.

Dr. A. G. SMART left St. John's Island on being relieved by Dr. J. ADAMS on the 28th July. The former temporarily acted as an additional Health Officer for Country Districts, Singapore, in addition to his other duties as Medical Officer in charge of Officials, Police and Gaol.

Dr. H. G. HOLDBROOK was transferred to Federated Malay States Service on the 2nd April, 1913.

The following new Medical Officers arrived from England:—

Dr. J. LOUDON, on 11th March, 1913.

„ J. ADAMS, on 28th March, 1913.

„ W. W. MARTIN, on 4th April, 1913.

„ V. B. KYLE, on 5th July, 1913.

Dr. R. D. KEITH, Principal, Medical School, proceeded on leave on the 4th April, and Dr. T. D. KENNEDY acted for him in addition to his duties as Assistant Principal to the end of the year.

Dr. G. A. FINLAYSON proceeded to Saigon as the Straits Settlements Delegate to the Far Eastern Medical Congress on the 3rd November, and returned on the 24th idem.

Of the 421 Officers of pure European birth serving in the Colony in 1913, 4 were invalided home during the year and 4 died. Of the latter, 2 died in the Colony, one on passage home, and one at home whilst on leave.



31. I append the following reports :—

- (a) Singapore Hospitals.
- (b) Penang Hospitals.
- (c) Province Wellesley Hospitals.
- (d) Malacca Hospitals.
- (e) Hospitals for Women.
- (f) Out-door Dispensaries.
- (g) Vaccination.
- (h) Quarantine.
- (i) Government Analyst's Department.
- (j) Medical School.
- (k) Pathological Department.
- (l) Labuan Report.


I append also the following returns from Singapore, Penang, Province Wellesley, Malacca and Labuan of :—

- (1) Statistics of Population.
- (2) Meteorological Returns.
- (3) Nosological Returns.

W. GILMORE ELLIS,  
*Principal Civil Medical Officer, S. S.*

SINGAPORE, 30th May, 1914.

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## APPENDIX A.

## SINGAPORE.

## GENERAL HOSPITAL.

REPORT BY DR. F. B. CROUCHER, *Senior Medical Officer-in-charge.*

## STAFF :

Physician	...	...	F. CROUCHER, M.B., C.M.
Surgeon	...	...	E. D. WHITTLE, M.R.C.S. (England).
Hon. Gynaecologist	...	...	N. BLACK, M.B., Ch.B., L.M.
Pathologist	...	...	G. FINLAYSON, M.B., Ch.B., M.R.C.P.
Resident Medical Officers	...	...	K. SIMPSON, M.B., Ch.B.
"	"	"	J. HARRISON, M.D., C.M.
"	"	"	V. B. KYLE, M.D.

1. *Hospital Buildings.*—The installation of electric light was completed in May, replacing the gas which was so often unsatisfactory, and the better light and the fans have effected a great improvement in the comfort of the patients.

The new X-ray apparatus was put up also in May and although a good deal of trouble was experienced from leakage of current due to damp, it has worked very satisfactorily on the whole.

A Thresh's Disinfector was supplied in January, and has enabled the clothing of all the native patients to be disinfected on admission.

2. *Staff.*—Dr. WHITTLE returned from leave on October 14th and took up the appointment of Surgeon, relieving Dr. GRAY.

Drs. SIMPSON and HARRISON remained at the hospital during the year.

Dr. ADAMS arrived from Europe on 31st March, 1913, relieving Dr. HOLDBROOK who was transferred to the Federated Malay States on 7th April, 1913.

Dr. KYLE arrived from Europe on 5th July, 1913, relieving Dr. ADAMS who was transferred to St. John's Island.

3. *Nursing Staff.*—Sisters WORTERS and BROADRICK resigned on April 4th, and Sister HALLIWELL on August 27th.

Sister GATES arrived from Europe on 13th April, Sisters GAWLER and CAMERON on 24th May, Sister RONALD joined the staff from the Nursing Association on 29th August, and Sister SANDISON arrived on 3rd September.

The following Nurse Probationers joined during the year :—

Miss ALLEN	on	13th January.
Mrs. MULCAHEY	"	6th February.
Miss COWAN	"	16th " (rejoined).
" ANGUS	"	17th "
" REID	"	16th April.
" HOGAN	"	1st May.
" CLUNES	"	3rd "
" KING	"	4th " (rejoined).
" O'MALLEY	"	24th July.
" SHARPE	"	8th August.
" HOWELL	"	22nd October.
" SÜCK	"	29th November.
" GIBBS	"	20th December.
Mrs. CALDWELL	"	1st November.

Mrs. JOYCE took up the new appointment of House-Keeper on 1st March, and resigned on 15th November, when she was succeeded by Miss O'MALLEY.

The following Probationers left :—

Misses WRAY, BETZHOLD, ALLEN, WHITEFIELD, MORTON, Mrs. MULCAHEY, Mrs. MATHIESON, Mrs. TOFT, (appointed to the Municipal Infectious Disease Hospital, Moulmein Road), Mrs. HENDERSON, Miss ANGUS (transferred to Penang), Miss REID (invalided), and Mrs. CALDWELL.

During the year sixteen Sisters and nine Probationers were admitted to Hospital, the chief causes of illness being Dengue and malaria.

4. *Dressers*.—Dresser VERASAMY was appointed on 17th January, 1913. Dresser M. KANAPATHI PILLAY resigned in May, and was replaced by Dresser WORTHINGTON.

Dresser DANKER resigned in July, and was replaced by Hospital Assistant LAZAROO from Tan Tock Seng Hospital.

Dresser TSEN AH VONG was appointed on 9th September.

Dressers MOHAMED and A. M. DE SILVA were transferred to Tan Tock Seng's Hospital in October, the latter being replaced by Dresser WILSON from Tan Tock Seng's Hospital.

Dresser DEVANESAM returned from leave in December.

5. *Servants*.—Thirty-seven new servants were engaged.

Seventeen servants were in hospital, the chief cause of illness being malaria.

6. *Work done*.—Comparative table showing the total number of patients treated in all wards during the past five years (exclusive of the maternity patients):—

Year.	European Wards.	Died.	Percent- age.	Native Wards.	Died.	Percent- age.
1909	793	33	4.16	3,311	256	7.73
1910	832	33	3.97	3,818	368	11.69
1911	844	39	4.62	4,564	485	10.62
1912	749	39	5.21	3,584	361	10.07
1913	791	38	4.8	3,509	278	7.92

7. Five hundred and sixty cases were sent in by the Police for treatment as free cases.

8. Of the above 38 European ward deaths, 12 took place within 48 hours of admission, and of the deaths in the Native wards, 91 took place within 48 hours of admission. Deducting these, the death-rate for the European ward was 3.28 per cent, and for the Native wards, 5.33 per cent.

#### First and Second Class Wards.

9. (a) The first and second-class wards were as usual overcrowded at times, the greatest number of patients on one day being 19 for 16 beds. The greatest number of patients in the third-class wards was 25 for 34 beds.

The chief diseases treated in these wards are shown below, together with a comparative statement for the previous four years.



(b) Patients in these wards include Europeans and better class natives.

Disease.	1913.	1912.	1911.	1910.	1909
Malaria ... ..	198	221	239	211	201
Enteric Fever ... ..	18	21	14	9	23
Phthisis ... ..	20	10	15	15	11
Dysentery ... ..	19	35	34	23	30
Venereal Disease ... ..	63	74	67	30	55
Abscess of Liver ... ..	3	2	6	5	...
Appendicitis ... ..	6	3	16	8	11
Dengue ... ..	29	2	...	...	...
Injuries ... ..	47	104	66	48	44

Other diseases of interest were:—Blackwater Fever 2, Diphtheria 7, and Erythema Scarlatinoides 1.

(c) The chief causes of deaths were:—Enteric Fever 5, Diphtheria 1, Pneumonia 3, Septicæmia 2, Meningitis 1, Uræmia 1, Valvular Disease of Heart 1, Phthisis 2, Abscess of Liver 1, Nephritis 2, and Pyo Salpingitis 1.

(d) *Operations*.—There were 151 operations performed in these wards during the year, the chief of which were Radical Cure of Hernia 4, Strangulated Hernia 2, Trephining 3, Œsophagotomy (for an imparted broken tooth plate) 1, Laparotomy 4, Appendicectomy 3, for abscess of Appendix 1, for Hepatic Abscess 4, and Lithotrity 1.

(e) The admissions for Venereal Diseases show a slight decrease.

(f) There was a large decrease in the number of admissions for injuries.

#### Native Wards.

10. (a) The greatest number of patients on any one day in the native male wards was 173 as against 214 in 1912.

(b) The chief diseases for which patients were admitted, together with a comparative table showing the number treated during the previous five years is shown below:—

Disease.	1913.	1912.	1911.	1910.	1909.	1908.
Malarial Fever ... ..	582	829	1,616	1,117	736	858
Injuries ... ..	944	1,017	865	889	768	809
Venereal Disease ... ..	223	271	278	371	246	284
Dysentery ... ..	54	124	149	119	130	158
Enteric Fever ... ..	57	37	76	42	69	101
Beri-beri ... ..	51	100	68	90	80	126
Pneumonia ... ..	49	46	33	...	54	23
Cholera ... ..	* 1	* 5	13	...	5	2

\* Transferred to Infectious Disease Hospital.

Other diseases were Phthisis 45, Bronchitis 44, Ulcers 78, Diphtheria 2, Leprosy 8, Diseases of the Eye 39, Empyema 8, Diseases of the Heart (valvular) 38, Hernia 15, (10 strangulated).

(c) The chief causes of death were:—Beri-beri 5, Dysentery 21, Diphtheria 1, Enteric Fever 21, Malaria 38, Pneumonia 18, Tetanus 1, Nephritis 12, Phthisis 24, Empyema 5, Strangulated Hernia 5, Intestinal Obstruction 2, Meningitis 2, Diseases of the Heart 16, Injuries 39, and Ankylostomiasis 4.

(d) Operations in these wards, native male and female, numbered 478. The chief were:—Plating of fractured bones 3, Wiring Patella 3, Wiring Olecranon 2, Amputations 35, Trephining 2, Laminectomy 2, Tracheotomy 2, for Empyema 5. Laparotomy 9, Appendicostomy 3, for Strangulated Hernia 13, Inguinal Hernia 3, Hepatic Abscess 2, External Urethrotomy 5, Ovariectomy 1, Removal of breast 2, Removal of benign tumours 7, of Malignant tumours 2, and Radical cure of hydrocele 12.

(e) Admissions for Malarial Fever show a large reduction on previous years and account for 38 deaths.

(f) Seventeen cases of beri-beri were sent to Pasir Panjang.

#### Native Police.

There were 653 admissions to Hospital as compared with 547 in 1912. They included 287 Sikhs, 269 Malays, 45 Tamils, and 52 Chinese.

The chief diseases under treatment were Malaria 153, Bronchitis 51, Venereal Diseases 50, Ulcers 32, No Discoverable Disease and Malingering 36, Dysentery 3, Phthisis 7, Conjunctivitis 14, (two specific), Dengue 9, and Diarrhoea 11.

There was again a diminution in the number of cases of Malaria under treatment, 153 against 190 in 1912.

There were two deaths, both among the Sikhs, one from Pernicious Anæmia and one from Malaria.

#### Maternity Wards.

The number of admissions shows a further increase on previous years, as the following figures show. Admissions include readmissions.

1908	...	...	...	...	143 admissions.
1909	...	...	...	...	173 „
1910	...	...	...	...	199 „
1911	...	...	...	...	233 „
1912	...	...	...	...	263 „
1913	...	...	...	...	327 „

Forty-two patients were treated by their own Medical Attendants.

The nationalities of those admitted were as follows:—

Of European Descent	...	...	55 with	47 deliveries including one abortion.
Eurasians	...	...	15 „	12
Chinese	...	...	191 „	170
Tamils	...	...	32 „	25
Japanese	...	...	9 „	7
Sikhs	...	...	12 „	12
Jews	...	...	4 „	2 (one abortion).
Singhalese	...	...	2 „	1
Hindus	...	...	7 „	6
Goanese	...	...	1 „	1
Total	...	...	328	283

The 283 cases included two abortions and three twin births.

The average weight of the European Male infants was lbs. 7.12 and of the Female lbs. 7.1½. The average weight of the native babies was, Males lbs. 6.12½, Females lbs. 6.3.

There were 29 premature and still births, 18 male and 11 female.

The large number may be attributed in many cases to the delay of the patients in coming to hospital.

The more serious cases included 2 of Adherent Placenta, 2 of Post Partum Hæmorrhage, 1 Transverse Presentation, 1 of Hydrocephalus, 1 Eclampsia, 1 Cerebral Malaria, 3 twin births and 2 Abortions.

There were 6 deaths, one from Post Partum Hæmorrhage, one from Adherent Placenta, one from Eclampsia, one from Cerebral Malaria, one patient was admitted in an advanced septic condition and died from Septicæmia and one who had been delivered outside died a few minutes after coming to hospital from Hæmorrhage and Shock.

Pituitrin was employed extensively in the wards, and proved of great utility.

The number of native midwives remaining under instruction at the beginning of the year was 4, all of whom received certificates.

Three more finished their training and passed their examination during the year, and four remained under instruction at the end of the year.

## PRISON HOSPITAL.

REPORT BY DR. A. G. H. SMART, *Medical Officer*.

1. The sanitary condition of the Prison and health of the prisoners during the year have been satisfactory.

2. There were no cases of Beri-beri nor of Enteric Fever during the past year.

3. The total number of cases treated in hospital was 1,066 with 19 deaths, giving a death-rate of 1.7 to total treated and 0.2 to total prison population.

4. Twenty-six European and Eurasian prisoners were admitted to hospital with no deaths. One European prisoner suffering from Abscess of Liver was transferred to the General Hospital for operation and died there.

5. *Criminal Prison*.—The total population was 3,346 and the average daily number 713. The number admitted to hospital was 937 and the average daily sick 36. There were 13 deaths. Pneumonia accounted for 4 deaths, Dysentery 3, Pulmonary Tuberculosis 3, Chronic Kidney disease 1, Perforating Ulcer of Stomach 1 and penetrating wound of abdomen and Liver 1. The last was a murderous assault by one prisoner on another, the patient died half an hour after admission to hospital.

6. *Civil Prison*.—The total population was 3,183 and the average daily number 66. There were 27 admissions to hospital with an average daily sick of 1.06. One death occurred from Pneumonia.

7. *House of Detention*.—The total population was 255 and the average daily number 20. There were 64 admissions to hospital with an average daily sick of 3. There were 5 deaths, Chronic Malaria 2, Chronic Dysentery 2, and Pulmonary Tuberculosis 1.

The majority of these men were in a most wretched condition on admission to Prison and quite unfit for any labour. Of those who died all had the disease which caused their deaths on admission. The number of admissions and deaths would have been larger, but as there were some cases of Cholera occurring in the town, it was considered advisable as a preventive measure to stop the admission of vagrants into Prison for a time.



8. Table showing admissions and deaths of various classes of prisoners for 1912 and 1913:—

		Criminal.		Civil.		Vagrants.	
		1912.	1913.	1912.	1913.	1912.	1913.
A.	Total population in Prison ...	3,218	3,346	3,636	3,183	488	255
B.	Average daily number ...	770	713	95	66	35	25
C.	Total treated in hospital ...	901	972	39	29	118	65
D.	Percentage C to A ...	27·9	29·0	1·07	0·9	24·1	25·4
E.	Total deaths in hospital ...	18	13	4	1	19	5

9. The prevailing diseases during the year were Diarrhœa, Dysentery and Colitis, 263 admissions to hospital with 5 deaths. Skin diseases mostly Eczema 130. Fevers including Malaria 102. Dyspepsia 73 and Eye diseases 69 admissions.

*Neuritis.*—There were 32 cases treated in hospital nearly all of whom were recurrences. The disease occurs mostly in prisoners who suffer from Dyspepsia and are run down in health.

10. *Tuberculosis.*—There were 7 admissions with 4 deaths, against 20 and 10 in 1912.

11. *Deaths in Hospital.*—There were 19 against 41 in the previous year distributed amongst the different grades. Short-sentence 7, Middle 2, Revenue 2, Lower 1, Upper 1, Vagrants 5, and 1 Civil prisoner.

12. Besides these deaths in hospital, an old Malay prisoner M. G. 123 was found dead in his cell—the cause of death being cardiac failure from old standing kidney disease. He had never complained of being sick and was never in hospital.

13. *Suicide.*—There were two—both by hanging—one Revenue Grade and one Remand prisoner waiting trial for murder.

14. *Executions.*—There were two.

15. *Transfers to Lunatic Asylum.*—There were four including one European long-sentence prisoner.

16. *Staff.*—Dr. TAYLOR was in charge until 14th October when he was transferred to Malacca.

Return of admissions into Prison Hospital, Singapore, for Venereal Disease in the year 1913:—

Sex.	No. admitted 1913.	Proportion of Prostitutes.	Remarks.
Male ...	33	...	...
Female ...	...	...	...

## TAN TOCK SENG'S HOSPITAL, SINGAPORE.

REPORT BY DR. J. R. MCVAIL, *Acting Medical Officer*.

## RESIDENT STAFF:

J. R. MCVAIL, M.B., Ch. B. | J. V. PESTANA, L.A.H. (Dub.), L.R.C.P.  
Messrs. D'SOUZA, MEHTA, ANDO and THUMBOO, Assistant Surgeons.

Visiting Physicians ... { (1) R. D. KEITH, M.A., M.D.  
... { (2) G. A. FINLAYSON, M.A., M.B., B. Ch., M.R.C.P. (Lon).  
Visiting Surgeon ... E. D. WHITTLE, M.R.C.S., L.R.C.P.  
Pathologist ... G. A. FINLAYSON, M.B., M.R.C.P.  
Assistant Pathologist ... Assistant Surgeon BARDHAM.

1. *Work done.*

Remained 31st December, 1912	...	...	...	565
Admitted 1913	...	...	...	11,460
Total				12,025
Discharged	...	...	...	10,154
Died	...	...	...	1,210
Remained 31st December, 1913	...	...	...	661
Total				12,025

2. The average daily sick was 615·11, as compared with 590·10 in 1912.

3. The percentage of deaths among cases treated to a conclusion was 10·64 per cent against 12·26 per cent in 1912, 14·33 per cent in 1911 and 15·71 in 1910.

4. There were 1,210 deaths during the year. Of these, the number dying within 24 hours of admission was 175. Deducting these, the death-rate is 9·25 per cent.

5. The average daily stay in hospital of those discharged was 12·23 days, of those dying 19·13 and of those remaining in hospital 122·57. The corresponding figures for last year were of those discharged 11·9 days, of those dying 11·6 days and of those remaining 122·3 days.

6. The admissions are 1,202 less than last year, when there were 12,662.

The principal diseases treated were :—Malaria, Ankylostomiasis, Dysentery, Beriberi, Venereal Diseases, Phthisis, Injuries, Abscess, Hepatic Cirrhosis, Pneumonia, Bronchitis, Enteric Fever. Details of some of these are given below.

7. The admissions from Malaria numbered 2,873, as compared with 4,014 last year. A difference in favour of this year of 1,141. There have been 149 deaths from Malaria during the year giving a death-rate of 5·4 per cent.

Last year there were 272 deaths equal to a death-rate of 6·7 per cent :—

<i>Types of Malaria.</i>		<i>Total Cases Treated.</i>	<i>Deaths.</i>
Benign Tertian	...	395	21
Quartan	...	219	35
Malignant Tertian	...	1,070	62
Chronic	...	377	22
Unclassified	...	895	9

Systematic blood examinations were carried out during the whole year.

The following results were obtained by the Tan Tock Seng's Staff :—

Malignant Tertian	...	...	...	...	336
Benign Tertian	...	...	...	...	141
Quartan	...	...	...	...	86
Mixed	...	...	...	...	29
Negative	...	...	...	...	608

In all 4,412 blood examinations were made for Malaria during the year by us. In addition a large number of blood examinations were made by the Medical Students who attend the wards. Of these we keep no record.

8. *Beri-beri*.—Eight hundred and fifty-four cases of beri-beri were treated during the year. Of these 69 still remain in hospital. There were 113 deaths, giving a death-rate of 14·4 per cent for the year. Last year 665 cases were treated and among them the death-rate was 20·7 per cent. Two hundred and eleven cases were transferred to Pasir Panjang Hospital. The cases admitted during the year numbered 806. Their nationalities were as follows :—

<i>Nationalities.</i>				<i>Total.</i>	<i>Deaths.</i>
—				—	—
Chinese	...	...	...	722	107
Malays	...	...	...	17	3
Japanese	...	...	...	46	1
Indians	...	...	...	12	1
Others	...	...	...	9	1
Total ...				806	113

9. *Dysentery*.—Five hundred and eighteen cases of Dysentery were admitted during the year of whom 270 died giving a mortality of 52·1 per cent. Last year the mortality was 55·95 per cent. Since July the hypodermic injection of Alkaloids of the Ipecacuanha root has been largely relied on in the treatment of this condition. We are greatly indebted to Dr. DENT and Mr. BUNKER for extracting the alkaloids for us. It was impossible to get Emetine in sufficient quantities in Singapore for our purposes, and but for their kind assistance it would have been impossible to have given this method of treatment a fair trial.

The results, on the whole, are distinctly encouraging. Among 131 patients who were treated entirely by this method, 78 have been discharged cured, 10 relieved and 43 died. So far as I can judge the chief advantage of this method is that as there is no nausea nor vomiting the medicine is retained. Many of our patients when given Ipecacuanha by the mouth vomit it up immediately the dressers' back is turned. The result is the same as if they received no treatment.

It is unfortunate that the great majority of our patients do not present themselves for treatment till they are in the last stages of the disease. That the high death-rate among them is entirely their own fault is shown by the results of the same treatment among Japanese to which I refer elsewhere.

10. *Enteric Fever*.—Fifty-three cases of Enteric Fever have been treated during the year of whom one still remains in hospital.

Of the 52 cases, 26 have died giving a mortality of 50 per cent. Last year the mortality under this head was 61·1 per cent. This is an improvement on the previous year but it is still far from satisfactory. Among the fatal cases 8 showed perforation with general peritonitis, one general peritonitis without actual perforation but with very deep ulceration. There were also 5 cases showing local peritonitis due to deep ulceration.

11. Venereal diseases were as follows :—

	<i>Cases.</i>	<i>Deaths.</i>
—		
Syphilis—Primary and Secondary	1,357	20
Gonorrhœa	97	...
Gonorrhœal and Syphilitic Arthritis	287	1
1,741		21



In 87 cases 99 intravenous injections of Neo Salvarsan were given. In no case did any untoward symptoms develop. I append a list of our cases and the results. As is shown, the four deaths following injection were in no way due to this treatment.

12. *Ankylostomiasis*.—Four hundred and fourteen cases of *Ankylostomiasis* have been treated during the year. Of these 20 remain in hospital. There were 47 deaths, giving a mortality among cases treated to a conclusion of 11·9 per cent. It is to be understood that the diagnosis is not put under this heading unless it has been shown clinically and microscopically that no other disease is responsible for the patients' condition and that ova are present in considerable number.

In last year's Annual Report I wrote "It is highly probable that this disease is increasing in the Colony and the surrounding States."

This year's figures show no sign of diminution. I am of opinion that sufficient attention is not paid towards its prevention.

Two thousand six hundred and fifty-eight stools were examined during the year with the following results:—

Ankylostomiasis ova	...	...	...	...	902
Round worm	„	...	...	...	185
Whip	„	„	...	...	92
Ankylostomiasis and round worm ova			...	...	193
„	„	Whip	„	„	113
Ankylostomiasis, round worm and whip worm ova				...	52
Round worm and whip worm ova	...		...	...	38
Negative	...	...	...	...	1,083
Total					2,658

### 13. *Tuberculosis*.—General and Pulmonary.

Three hundred and thirty-three cases of Pulmonary Tuberculosis have been under treatment during the year. Of these 182 have died. There were 28 cases of General and Glandular conditions with 9 deaths. The mortality from these conditions was 51·2 per cent.

Six hundred and ninety-nine Sputa were examined during the year for the Tubercle Bacillus and in 287 the result was positive.

14. *Ulcers*.—One thousand two hundred and forty-three cases of ulcers were admitted during the year compared with 2,484 cases last year, a difference in favour of this year of 1,241.

15. *Tetanus*.—Two cases were admitted during the year of whom one died. Last year there were 9 cases with 8 deaths. As most of last year's cases were among patients admitted with dirt infected wounds we began early this year to treat all such cases coming to the hospital with injections of antitetanic Serum immediately after admission. Not one case of Tetanus has developed in the hospital since then.

16. *Operations*.—I append a list of all operations performed during the year with their results. There were 1,443, compared with 941 in 1912, 846 in 1911 and 583 in 1910.

17. *Lunacy*.—One hundred and seventy-nine cases were sent for observation of whom 118 were certified insane. The lunatic attendants supplied from the Asylum continue to perform their work well.

18. *Medico-Legal*.—Fifty-seven dead bodies were sent by the Coroner for post-mortem examination. Five hundred and twenty-five cases were sent by the Police for treatment.

19. *European Ward*.—The number treated in the European ward last year was 275.

			<i>Europeans.</i>	<i>Eurasians.</i>	<i>Others.</i>
			—	—	—
1911	...	...	105	87	56
1912	...	...	119	90	78
1913	...	...	132	90	53

20. *Japanese*.—As the following table shows the number of Japanese admitted to the hospital continues to increase by leaps and bounds.

<i>Year.</i>				<i>Admissions.</i>	<i>Year.</i>				<i>Admissions.</i>
—				—	—				—
1900	...	...	...	3	1907	...	...	...	43
1901	...	...	...	5	1908	...	...	...	49
1902	...	...	...	7	1909	...	...	...	31
1903	...	...	...	8	1910	...	...	...	110
1904	...	...	...	7	1911	...	...	...	172
1905	...	...	...	10	1912	...	...	...	344
1906	...	...	...	20	1913	...	...	...	627

21. They are mostly of the coolie class. Two hundred and twenty-two of them stated that they came from Johore. I am of opinion that many more came from the same place but for some reason or other they prefer to say they come from Singapore.

That they possess a better idea of the benefits to be gained from modern treatment than Chinese and Tamils do, is shown by the fact that they come to hospital in the early stages of their disease. Among 627 Japanese admitted last year the death-rate was 2·4 per cent, less than quarter of the general death-rate of the hospital. Among 26 cases of Dysentery treated to a conclusion 24 were cured, 1 relieved and one died, showing a death-rate of 4 per cent as compared with a general death-rate amongst all our patients of over 50 per cent from this disease. I am inclined to attach a good deal of importance to these results.

22. I was in charge all year till 6th December when Dr. J. V. PESTANA took charge during my absence. Mr. F. RODRIGUES, Senior Assistant Surgeon, was transferred to Kandang Kerbau Hospital on July 1st. He was replaced by Dr. J. V. PESTANA from the out-door dispensary.

23. The Steward, Mr. N. THAMODARAM PILLAY was granted sick leave on 18th November, 1913, and invalided out of the service in December. He was an honest and conscientious worker. In him the hospital has lost a good servant.

From 18th November, 1913 till the end of the year the Steward's duties were ably performed by Senior Dresser TEO CHIN SENG.

As last year we never had our full complement of dressers. Since September, 8 volunteer Dressers were paid at the rate of \$15 a month, and there was an immediate improvement in their work and attendance. Now that this system has been extended and the training of Hospital Assistants and Dressers is being set about in earnest there is every indication that most of the difficulties we have had to contend with in this department will ultimately be overcome.

Dr. W. MCD. SCOTT acted as Pathologist till May when Dr. FINLAYSON resumed duty. Messrs. K. ANDO, A. J. THUMBOO and S. N. BARDHAM assisted at different times throughout the year.

When Dr. R. D. KEITH, Consulting Physician to the hospital went on leave in March, Dr. FINLAYSON took over his wards and acted as Consulting Physician during the rest of the year.

24. His Excellency the Governor visited and inspected the Hospital on Christmas Day.

The Principal Civil Medical Officer visited and inspected the hospital, Male and Female Leper Camps, etc., on 24 occasions.

The Tan Tock Seng's Hospital Committee paid 12 visits of inspection.

## QUARANTINE CAMP, SINGAPORE.

One case remained at the end of 1912. There were 27 admissions from 1st January to 31st May, 1913, making a total of 28 treated in all. There were 9 deaths giving a percentage of 32·14.

The daily average number of patients in hospital was 2·93.

Three cases of Cholera were admitted, two died.

The number of cases of small-pox treated was 19 with 4 deaths.

The following table shows how vaccination controls the death-rate:—

<i>Vaccination marks.</i>	<i>No. of cases.</i>	<i>Deaths.</i>	<i>Mortality.</i>
—	—	—	—
None.	4	4	100 per cent.
1	2	...	...
2	3	...	...
3	10	...	...
	—	—	
Total ...	19	4	
	—	—	

The camp was closed on 31st May when the Municipality opened their new Infectious Diseases Hospital.

## LEPER ASYLUM, SINGAPORE.

1. *Male Camp.*—

Remained on 31st December, 1912	...	18
Admitted 1913	...	55
	Total ...	73
Transferred to Pulau Jerejak	...	40
Absconded	...	21
Died	...	7
Remaining on 31st December, 1913	...	5
	Total ...	73

2. *Female Camp.*--

Remained on 31st December, 1912	...	32
Admitted 1913	...	7
	Total ...	39
Absconded	...	2
Died	...	4
Remaining on 31st December, 1913	...	33
	Total ...	39

3. The buildings of the Female Leper Asylum have been re-attapped during the year.



**KWONG-WAI-SHIU FREE HOSPITAL, SINGAPORE.**

(Managed entirely by Chinese with 3 Chinese Doctors trained in Eastern methods and one trained in the local Medical School).

During the year under review 3,406 cases were treated to a conclusion in this hospital of whom 733 died. On the Western side 873 cases were treated with 119 deaths, a mortality of 15.78 per cent. On the Eastern side there were 3,406 cases with 614 deaths, showing a mortality of 21.99.

As the result of the Principal Civil Medical Officer's recommendations note taking has been started on the Western side and I understand that a microscope is to be purchased.

The sanitary state of the hospital is good and the Managers appear anxious to keep it so. I have never found any difficulty in getting details under this heading attended to.

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LIST OF NEO SALVARSAN INJECTED INTRAVENOUSLY DURING THE YEAR 1913  
AT THE TAN TOCK SENG'S HOSPITAL.

Admission No.	Disease.	No. of Injections.	Remarks.
E. 17	Primary Syphilis ...	2	Cured.
E. 18	Secondary " ...	2	"
1,016	" " ...	2	"
890	Tertiary " ...	1	Relieved—absconded.
797	Secondary " ...	1	"
Kigdoji	Chancre and Tertiary ...	1	Cured.
1,159	Secondary Syphilis ...	1	Relieved.
990	Chronic Ulcer ...	1	Cured.
414	Pustular Syphlide ...	1	"
2,447	Chronic Malaria ...	$\frac{1}{2}$ dose	"
2,191	" " ...	$\frac{1}{2}$ dose	"
203	Gumma + Syphilitis glossitis of tongue ...	3	"
4	Tertiary Syphilitis ...	1	Died of Malaria.
11,483	Chronic Malaria ...	1	Cured.
2,605	Tertiary Syphilis ...	1	No improvement.
2,191	Chronic Malaria ...	$\frac{1}{2}$	Cured.
2,477	" " ...	$\frac{1}{2}$	"
2,545	Secondary ...	1	Relieved.
3,002	" and Iritis ...	1	Cured.
2,764	" " ...	1	Relieved.
3,199	Tertiary ...	2	Cured.
3,247	Secondary ...	2	Relieved.
3,745	Tertiary ...	1	Cured.
3,272	Secondary ...	1	Relieved.
3,639	" ...	1	Cured.
4,070	" ...	1	"
4,262	" ...	1	"
280	Chronic Malaria ...	1	"
4,693	Secondary ...	1	Relieved.
4,184	Tertiary ...	1	Died of Cystitis.
4,792	Secondary ...	1	Cured.
492	" ...	1	"
4,492	" and Gonorrhœa ...	1	Relieved.
5,007	Tertiary ...	1	"
4,766	" ...	1	"
3,062	Secondary ...	1	Cured.
2,168	" ...	1	"
435	" + Iritis ...	1	Relieved—absconded.
5,104	" ...	1	Cured.
5,539	" ...	1	Relieved—absconded.
4,866	Primary Syphilis ...	1	Cured.
3,166	Syphilitic Arthritis ...	1	"
5,708	" " ...	1	Relieved.
6,113	Secondary ...	1	"
5,790	" ...	1	"
5,825	Tertiary ...	1	Cured.
5,888	Secondary ...	2	Improving (still in hospital).
6,187	" ...	1	Relieved.
3,519	" ...	1	Cured.

Admission No.	Disease.	No. of Injections.	Remarks.
6,560	Secondary ...	I	Cured.
6,863	" ...	I	Relieved.
6,530	Tertiary ...	I	Cured.
596	Secondary Syphilis ...	I	"
6,843	" " ...	I	Relieved.
428	" " ...	2 + $\frac{1}{2}$	Cured.
7,655	Syphilis + Beri-beri ...	I	Relieved.
8,238	Tertiary ...	I	"
5,418	Secondary ...	I	Improving (still in hospital).
3,274	" ...	I	Relieved.
570	Gonorrhœa ...	I	Cured.
8,527	Secondary and Dysentery ...	I	Died of Dysentery.
8,827	Syphilitic Iritis ...	$\frac{1}{2}$	Cured.
9,045	Secondary ...	I	Relieved.
8,164	" ...	I	Improving (still in hospital).
8,634	" ...	I	Relieved.
8,304	" ...	I	Cured.
8,227	" ...	I	Relieved.
702	" ...	I	"
9,000	Tertiary ...	I	"
9,202	" ...	I	Improving (still in hospital).
9,627	Cerebral Gumma ...	I	Cured.
8,537	Gonorrhœal Rheumatism ...	I	"
9,139	Chronic Malaria ...	2	Improving (still in hospital).
9,168	Secondary ...	I	Relieved.
9,801	" + Iritis ...	I	Cured.
9,843	Tertiary ...	I	Relieved.
9,819	Secondary ...	I	"
5,543	" ...	I	Improving (still in hospital).
8,892	" ...	I	" "
9,290	" ...	I	" "
9,941	" Syphilis ...	I	Relieved—absconded.
9,922	" " ...	I	" "
9,827	" " ...	I	Improving (still in hospital).
7,939	Tertiary " ...	I	Relieved.
3,352	Locomotor Ataxy + Secondary ...	I	Improving (still in hospital).
10,153	Secondary ...	I	" "
Gillan	" ...	$\frac{1}{2} + \frac{1}{2}$	Cured.

Total number of injections ... 99

Total number of Deaths after injection ... 4

One died of Dysentery.

" Malaria.

" Cystitis.

" Gumma of brain.

I Dose = .9 gram Neo Salvarsan.

$\frac{1}{2}$  Dose = .45 gram Neo Salvarsan.



## TAN TOCK SENG'S HOSPITAL, SINGAPORE.

## LIST OF OPERATIONS FOR THE YEAR 1913.

	Total.	Cured.	Relieved.	Died.
Abscesses incised, etc. ...	193	193	...	...
„ Liver ...	6	3	...	3
„ Spleen ...	1	1	...	...
„ Subphrenic ...	1	1	...	...
Appendicular abscess incised and drained ...	1	1	...	...
Amputation—Penis ...	1	1	...	...
„ Toe ...	4	4	...	...
„ Finger ...	3	3	...	...
„ Foot ...	2	2	...	...
„ Leg ...	8	7	...	1
„ Hand ...	1	1	...	...
„ Thigh ...	1	1	...	...
Aspiration—Knee ...	2	...	...	...
„ Cold abscess ...	2	1	...	1
„ Cyst ...	1	1	...	...
„ Chest ...	32	32	...	...
Bone wiring ...	1	...	...	1
Separating adhesions causing chronic intestinal obstruction ...	2	2	...	...
Bubo incision ...	101	101	...	...
„ Curetting ...	22	22	...	...
Cauterisation ...	3	3	...	...
Circumcision ...	92	92	...	...
Curetting ulcer ...	31	31	...	...
„ Sinus ...	32	32	...	...
„ Chancre ...	9	9	...	...
„ Fistula ...	7	7	...	...
„ Condyloma ...	1	1	...	...
„ Fissure ...	3	3	...	...
„ Joints ...	3	1	2	...
„ Carbuncle ...	1	1	...	...
Cellulitis incision ...	16	16	...	...
Extraction of lens for Cataract ...	6	5	1	...
Cholecystitis ...	1	1	...	...
Chloroform Examination ...	4	...	...	...
Dilation of Stricture ...	21	...	21	...
Entropion (Plastic operation) ...	4	4	...	...
Empyemata incised and drained ...	17	6	...	11
Enucleation of glands ...	7	6	1	...
Examination of Tumour ...	1	...	...	...
Excision of Eyeball ...	8	8	...	...
„ Testicle ...	4	4	...	...
„ infected portion of omentum ...	1	1	...	...
Exploration chest ...	26	26	...	...
„ Knee ...	5	5	...	...
„ Tumour ...	3	2	...	1
„ Liver ...	1	1	...	...
Extravasation of urine multiple incisions ...	1	1	...	...
Extraction of Teeth ...	44	44	...	...
<i>Carried forward</i> ...	737	...	...	...

LIST OF OPERATIONS—*continued.*

—	Total.	Cured.	Relieved.	Died.
<i>Brought forward</i> ...	737	...	...	...
External Urethrotomy ...	4	4	...	...
Exploratory Laparotomy ...	13	13	...	...
Extravasation of Urine $\frac{c}{c}$ General				
Peritonitis ...	1	1	...	...
Gastro-jejunostomy ...	1	1	...	...
Gastrostomy ...	1	...	...	1
General Peritonitis due to Typhoid and Dysenteric perforation—cavity drained ...	3	...	...	3
Hernia—Strangulated ...	2	2	...	...
" Radical cure ...	11	11	...	...
Hydrocele Tapping ...	4	...	4	...
" Radical cure ...	11	11	...	...
Hypopion incision ...	3	2	1	...
* Intravenous 914 ...	99 <sup>(87 cases)</sup>	83	...	4
" Quinine ...	1	1	...	...
" Saline ...	4	4	...	...
Incision of Aneurism ...	1	...	...	...
" Gumma ...	11	11	...	...
Jejunostomy ...	1	...	...	1
Ligaturing arteries for Aneurism (Common Carotid) ...	1	1	...	...
Ligaturing arteries for Aneurysm (Femoral) ...	1	1	...	...
Nephropexy ...	1	...	1	...
Omentopexy ...	14	...	13	1
Paracentesis abdominalis ...	190	...	190	...
Piles Ligatured ...	8	8	...	...
Piles excised ...	2	2	...	...
Whitehead's Operation ...	4	2	2	...
Pyocele incision and drainage ...	3	3	...	...
Removal of foreign bodies ...	4	3	...	1
" Cyst ...	2	2	...	...
Portion of rib excised (Osteomyelitis) ...	2	1	1	...
Sequestrotomy ...	15	15	...	...
Hordeolum ...	2	2	...	...
Supra Pubic Puncture ...	3	1	...	2
Suturing of Intestine and Liver ...	1	...	...	1
" wounded intestine ...	3	2	...	1
" bladder ...	1	...	...	1
Splenectomy ...	3	...	...	3
Suturing Tendons ...	1	1	...	...
Tracheotomy ...	1	...	...	1
Thoracotomy for Empyema ...	3	2	...	1
Venesection ...	1	...	...	1
Whitlow incised ...	3	3	...	...
Wounds sutured ...	266	...	...	...
Total ...	1,443	...	...	...

\* Deaths after 914.

One died of Cystitis, 1 died of Malaria, 1 died of Dysentery, 1 died of Gumma of brain, Symptoms relieved for some time by injection. In no case were symptoms of any severity shown after the injection of Neo Salvarsan.

## LUNATIC ASYLUM.

REPORT BY DR. H. J. GIBBS, *Medical Superintendent*.

There remained on 31st December, 1912, 357 males and 73 females; 209 males and 48 females were admitted in 1913, making a total treated of 566 males and 121 females.

Of the above 20 males and 6 females were not first admissions.

Of the total treated in 1913, 87 males and 17 females were discharged recovered; 9 males and 2 females relieved; 9 males and 5 females not improved; 19 males and 1 female absconded and 55 males and 9 females died.

There remained in the Asylum, on 31st December, 1913, 387 males and 87 females, a total of 474 patients.

The average daily number resident was 455 consisting of 377 males and 78 females.

The maximum and minimum daily numbers were 489 and 429 respectively.

Of the 474 patients remaining on 31st December, 1913 :—

*Males. Females.*

—	—				
221	49	...	...	came from Singapore.	
2	3	...	...	„ „ Johore.	
25	7	...	...	„ „ Malacca.	
2	—	...	...	„ „ Seremban.	
107	24	...	...	„ „ Penang.	
23	2	...	...	„ „ Province Wellesley.	
3	1	...	...	„ „ Kuantan.	
1	—	...	...	„ „ Kelantan.	
1	—	...	...	„ „ Christmas Island.	
2	1	...	...	„ „ Labuan.	

The nationalities of the above were :—

				<i>Males.</i>	<i>Females.</i>
				—	—
British	...	...	...	6	0
American	...	...	...	0	1
Dutch	...	...	...	0	1
Austrian	...	...	...	1	0
Eurasian	...	...	...	11	5
Tamil	...	...	...	21	3
Malay	...	...	...	23	8
Javanese	...	...	...	12	7
Bugis	...	...	...	0	1
Bengali	...	...	...	2	0
From Bombay	...	...	...	1	0
Arab	...	...	...	3	0
Jew	...	...	...	1	0



				<i>Males.</i>	<i>Females.</i>
				—	—
<i>Chinese :—</i>					
Hokkien	...	...	...	114	18
Teochew	...	...	...	50	4
Cantonese	...	...	...	43	34
Hakka	...	...	...	39	4
Hailam	...	...	...	31	0
Kow Chew	...	...	...	4	0
Lui Chew	...	...	...	6	0
Hok Chia	...	...	...	4	0
Tribe not known	...	...	...	15	1

*Admissions.*—Of the 257 admissions 144 males and 29 females came from Singapore, 40 males and 14 females came from Penang, 9 males and 1 female came from Province Wellesley, 15 males and 2 females came from Malacca, 1 male came from Perak, 2 females came from Johore.

The number of the male and the female admissions are the highest on record.

The physical condition of the admissions on admission is shown as :—

				<i>Males.</i>	<i>Females.</i>
				—	—
" Good "	...	...	...	50	8
" Fair "	...	...	...	80	19
" Impaired "	...	...	...	60	15
" Greatly impaired "	...	...	...	19	6

As to the causes assigned for the mental breakdown venereal diseases head the list with 36, malaria follows with 34, alcoholic intemperance 29, previous attacks 28, senility 20, other bodily disorders (amongst which are enteric fever and uræmia) 21 and domestic troubles 12.

Of the 34 cases of malaria the mental signs presented in 32 were those of acute mania, one was a melancholiac and one, a youth of 17, was demented.

Twenty-five male and 9 female suicidal patients were admitted, of these 6 males and 2 females were acutely melancholic, 13 males and 4 females were acutely maniacal (6 of 13 males were suffering from malaria); 4 males suffered from mania due to indulgence in alcohol, 1 male and 2 females were cases of senile mania, 1 male, an Eurasian, suffered from general paralysis and 1 female was a chronic dement.

Cardio-vascular changes were present in 61 of the admissions.

*Criminal Population of the Asylum.*—There remained on 31st December, 1912, 9 lunatic criminals and 21 criminal lunatics. Seven lunatic criminals and 6 criminal lunatics were admitted in 1913, making a total treated of 16 lunatic criminals and 27 criminal lunatics. Of these 3 died, 5 recovered; the sentence of 1 expired and there remained on 31st December, 1913, 10 lunatic criminals and 24 criminal lunatics.

*Discharges.*—The recovery rate, based on the admissions for the year was 41·63 for the males and 35·42 females or 40·47 on the whole. The very crowded state of the Asylum throughout the year tended to retard the recovery rate.

A female who had been in residence for seven years and was looked upon as a chronic dement made a perfect recovery and was discharged.

Six male and three female patients were repatriated to India.

*Deaths.*—The death-rate, based on the average daily number resident, was 14·29 per cent; on the total treated it was 9·31 per cent. This is the lowest on record.

For the males the rate, on the average daily number, was 14·59 per cent and 11·4 per cent for the females.

On the total treated the rates respectively for the males and females were 9·72 per cent and 7·44 per cent.

The causes of death are shown in Table V.

One of the two deaths from cerebral hæmorrhage resulted from the rupture of the middle meningeal artery following a blow on the head with a broom handle inflicted by another patient. The injured man was removed to the General Hospital and there trephined. He succumbed a few hours after the operation.

Dysentery was prevalent during the wet seasons. In all the 70 cases which occurred, the type of the disease was that of the acute bacillary variety. None of the stools examined showed amœbæ.

*Ankylostomiasis* has been more noticeable than in previous years.

*Casualties.*—The majority of these were of a trifling nature. There were two cases of fractured ribs and the case of homicide referred to above.

The overcrowded state of the Asylum lends itself to the large number of trivial casualties.

*Abscondments.*—The number of abscondments is the highest since 1888. No fewer than 19 males and 1 female made good their escape. There can be no doubt that owing to the large numbers of patients and the facilities afforded by the buildings, escape is easy.

*Industries.*—During the year 6,284 yards of check and plain cotton cloth were woven, from which was made clothing for patients.

Seventy strong rugs were made from 14 bolts of canvas purchased.

The revenue derived from paying patients amounted to \$7,486.30 which is \$861.16 in excess of that for 1912.

*Staff.*—Mr. BATEMAN has continued as Assistant Surgeon throughout the year.

Mrs. GUNN, the Matron, proceeded to England on 12 months' leave of absence on 2nd June, 1913, her place being filled by Mrs. NIALL, a trained Asylum Nurse.

European Attendant NIALL returned from leave early in January, 1913.

TABLE I.

## LUNATIC ASYLUM.

*Table showing the Admissions, Discharges and Deaths during the Year 1913.*

—	Male.	Female.	Total.	Male.	Female.	Total.
In the Asylum on 1st January, 1913	...	...	...	357	73	430
Cases admitted :—						
First Admissions	...	...	...	189	42	231
Not First Admissions	...	...	...	20	6	26
Total cases under care during the year	...	...	...	566	121	687
Cases Discharged :—						
Recovered	87	17	104	..	...	...
Relieved	9	2	11	...	...	...
Not Relieved	9	5	14	...	...	...
Absconded	19	1	20	...	...	...
Died	55	9	64	...	...	...
Total cases discharged and died during the year	...	...	...	179	34	213
Remaining in the Asylum on 31st December, 1913	...	...	...	387	87	474
Average number resident during the year	...	...	...	377	78	455



TABLE II.

## LUNATIC ASYLUM.

*Table showing the Admissions, Re-admissions, Discharges and Deaths from 31st December, 1888, to 31st December, 1913.*

—		Male.	Female.	Total.	Male.	Female.	Total.
Remaining on the 31st December, 1888	...	...	...	...	176	32	208
Persons admitted during the period	...	...	...	...	3,995	695	4,690
Re-admissions	...	...	...	...	417	86	503
Total cases treated		...	...	...	4,588	813	5,401
31							
Discharged Cases :—							
Recovered	...	1,831	261	2,092	...	...	...
Relieved	...	415	106	521	...	...	...
Not improved	...	126	52	178	...	...	...
Absconded	...	151	23	174	...	...	...
Died	...	1,678	284	1,962	...	...	...
Total cases discharged and died since 31st December, 1888	...	...	...	...	4,201	726	4,927
Remaining in the Asylum on 31st December, 1913	...	...	...	...	387	87	474

TABLE III.

## LUNATIC ASYLUM.

Table showing the Admissions, Discharges and Deaths, with the Mean Annual Mortality and Proportion of Recoveries per cent on the Admissions for the Year 1886 to 1913 inclusive.

YEAR.	Admitted.			Discharged.						Absconded.			Died.			Remaining on 31st December of each Year.			Average Number Resident.			Percentage of Recoveries on Admissions.			Percentage of Deaths on the Average Number Resident.		
	Male.	Female.	Total.	Recovered.		Relieved.		Not Improved.		Total.			Male.			Male.			Male.			Male.			Male.		
				Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1886	...	...	164	...	...	...	...	...	...	...	...	...	49	10	59	169	23	192	...	...	...	...	...	...	...	...	...
1887	173	17	190	...	...	...	...	...	...	...	...	37	73	4	77	178	29	207	183	27	210	...	...	...	39'89	14'81	33'52
1888	153	23	176	35	9	5	2	2	1	...	...	29	84	8	92	176	32	208	190	35	225	22'97	39'28	25'00	43'97	25'00	36'49
1889	186	24	210	67	6	13	4	7	...	...	...	5	74	6	80	196	40	236	202	35	237	36'02	25'00	34'76	36'69	17'14	40'70
1890	224	30	254	87	7	23	1	4	1	5	1	6	145	11	156	157	48	205	186	41	227	38'83	23'33	37'00	77'40	38'18	33'37
1891	162	30	192	13	13	12	3	15	2	...	...	9	76	11	87	161	49	210	153	47	200	37'65	43'33	38'54	49'67	23'40	43'50
1892	158	29	187	71	14	85	4	19	...	...	...	7	43	14	57	179	43	222	170	44	214	44'94	48'27	48'45	25'29	31'82	26'63
1893	184	33	217	65	7	15	5	13	6	5	11	2	43	5	48	240	53	293	205	49	254	35'32	21'21	33'17	20'97	10'20	18'89
1894	169	29	198	69	11	80	21	4	3	1	1	3	73	16	89	239	48	287	244	52	296	40'83	37'93	40'41	29'92	30'77	30'07
1895	173	34	207	70	9	79	45	10	3	9	3	10	99	13	112	180	46	226	206	46	252	40'40	26'47	38'16	48'06	28'26	44'42
1896	202	28	230	86	16	102	7	9	2	3	6	85	205	49	254	205	49	254	183	50	233	42'57	57'14	44'35	43'17	12'00	36'48
1897	122	26	148	62	9	71	18	25	...	2	2	81	171	50	221	171	50	221	181	47	228	50'86	34'61	47'95	39'77	19'15	33'52
1898	137	24	161	61	7	68	16	17	6	4	...	95	125	48	173	125	48	173	156	52	208	44'52	29'17	42'24	54'49	19'23	45'17
1899	157	30	187	51	12	63	14	17	4	7	...	65	123	55	178	123	55	178	131	53	184	39'23	31'81	38'80	42'75	16'98	35'32
1900	154	21	175	54	5	59	9	2	2	4	...	123	118	47	165	118	47	165	128	52	180	34'39	16'60	31'02	72'66	57'69	68'30
1901	143	16	159	74	10	84	18	20	1	6	...	56	127	45	172	127	45	172	118	46	164	43'57	47'62	48'00	39'98	21'52	34'15
1902	191	30	221	82	8	90	11	12	1	5	1	6	42	4	46	133	46	179	130	44	174	57'34	50'00	56'60	29'23	9'09	24'14
1903	223	31	254	90	7	77	15	17	10	9	3	9	44	11	55	179	52	231	160	49	209	36'64	23'33	34'84	27'50	22'44	26'31
1904	200	28	228	101	5	106	20	23	2	5	...	59	232	51	283	232	51	283	213	55	268	40'36	45'16	40'94	22'53	20'00	22'01
1905	199	32	231	85	11	96	22	31	8	12	2	14	54	13	67	235	43	278	239	48	287	50'50	17'80	42'10	22'59	27'08	23'34
1906	163	34	197	88	8	88	22	38	4	8	1	9	71	4	75	238	48	286	245	45	290	42'71	34'37	41'56	28'98	8'88	25'77
1907	175	37	212	57	7	64	23	30	4	7	1	8	47	10	57	241	55	296	243	49	292	49'08	23'53	44'67	19'34	20'40	19'52
1908	174	46	220	77	16	93	17	22	3	9	1	10	45	20	65	279	57	336	265	61	326	32'57	18'92	30'19	16'98	32'78	19'93
1909	182	46	228	79	14	93	14	22	4	8	2	8	65	13	78	284	67	351	281	63	344	44'25	34'78	42'27	23'13	20'63	22'67
1910	190	30	220	70	11	81	7	9	5	7	2	7	102	13	115	262	71	333	285	74	359	43'41	30'43	40'79	35'79	17'57	32'03
1911	205	33	238	75	17	92	8	9	2	9	1	7	67	20	87	299	65	364	288	70	358	36'84	36'6	36'81	23'26	28'57	24'30
1912	209	48	257	87	17	104	9	11	5	19	1	20	55	9	64	357	73	430	326	67	393	36'58	51'51	38'69	17'44	8'95	16'31
1913	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...







LUNATIC ASYLUM.

[illegible]

TABLE VI.

## LUNATIC ASYLUM.

*Table showing the Length of Residence of those Discharged, Recovered and of those who Died, during the Year 1913.*

Length of Residence.				Recovered.			Died.		
				Male.	Female.	Total.	Male.	Female.	Total.
Under one month	...	...	...	3	...	3	12	...	12
From one to three months	...	...	...	22	3	25	5	1	6
„ three to six months	...	...	...	21	10	31	5	3	8
„ six to nine months	...	...	...	17	2	19	3	...	3
„ nine to twelve months	...	...	...	7	1	8	7	1	8
„ one to two years	...	...	...	13	...	13	8	1	9
„ two to three years	...	...	...	1	...	1	5	...	5
„ three to five years	...	...	...	2	...	2	3	2	5
„ five to seven years	...	...	...	...	...	...	4	...	4
„ seven to ten years	...	...	...	1	1	2	3	...	3
„ ten to fifteen years	...	...	...	...	...	...	...	1	1
TOTAL				87	17	104	55	9	64



TABLE X-a.  
LUNATIC ASYLUM.

Table showing the Probable Causes, Apparent or Assigned, of the Disorders in the Admissions, Discharges and Deaths of the Year 1913.

CAUSES.	ADMISSIONS.											
	Number of Instances in which a Cause was Assigned.											
	Admissions :—Male 209. Female 48. Total 257.											
	As Predisposing Cause.			As Exciting Cause.			As Predisposing or Exciting Cause.*			Total. †		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
<i>Moral.</i>												
Domestic Troubles (including loss of relatives and friends) ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Adverse Circumstances (including business anxieties and pecuniary difficulties) ...	...	...	...	6	6	12	...	...	...	6	6	12
Mental Anxiety and Worry and Overwork ...	...	...	...	...	1	1	...	...	...	...	1	1
Religious Excitement ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Love Affairs (including seduction) ...	...	...	...	...	...	...	...	...	...	...	...	...
Fright and Nervous Shock ... ..	...	...	...	...	1	1	...	...	...	...	1	1
<i>Physical.</i>												
Intemperance in Drink ... ..	...	...	...	28	1	29	...	...	...	28	1	29
Venereal Disease ... ..	17	...	17	6	...	6	11	2	13	34	2	36
Self-abuse ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Sunstroke ... ..	...	...	...	1	...	1	...	...	...	1	...	1
Accident or Injury ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Pregnancy ... ..	...	...	...	...	...	...	...	2	2	...	2	2
Parturition and the Puerperal State ...	...	...	...	...	...	...	...	...	...	...	...	...
Uterine and Ovarian Disorders ... ..	...	...	...	...	3	3	...	...	...	...	3	3
Lactation ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Puberty ... ..	...	...	...	4	...	4	...	...	...	4	...	4
Epilepsy ... ..	...	...	...	...	...	...	4	...	4	4	...	4
Privation and Starvation ... ..	...	...	...	4	3	7	...	...	...	4	3	7
Heart Disease ... ..	...	...	...	...	...	...	...	1	1	...	1	1
Phthisis ... ..	...	...	...	4	2	6	...	...	...	4	2	6
Malarial Fever ... ..	...	...	...	34	...	34	...	...	...	34	...	34
Typhoid Fever ... ..	...	...	...	...	1	1	...	...	...	...	1	1
Other Bodily Diseases or Disorders ...	...	...	...	12	8	20	...	...	...	12	8	20
Previous Attacks ... ..	22	6	28	...	...	...	...	...	...	22	6	28
Old Age ... ..	17	3	20	...	...	...	...	...	...	17	3	20
Morphia Habit ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Hereditary Influences ascertained ...	...	3	2	5	...	...	...	...	...	3	2	5
Congenital Defect ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Indian Hemp Smoking ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Unknown ... ..	...	...	...	...	...	...	...	...	...	79	24	103

\* Where these could not be distinguished. † Some of the admissions are credited with more than one cause; therefore, the sum of the "known" and "unknown" exceeds that of the admissions.

TABLE X-b.

## LUNATIC ASYLUM.

Table showing the Probable Causes, Apparent or Assigned, of the Disorders in the Admissions, Discharges and Deaths of the Year 1913.—Continued.

CAUSES.	DISCHARGES.											
	Number of Instances in which a Cause was Assigned.											
	Discharges:—Male 124. Female 25. Total 149.											
	As Predisposing Cause.			As Exciting Cause.			As Predisposing or Exciting Cause.*			Total. †		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
<i>Moral.</i>												
Domestic Troubles (including loss of relatives and friends) ... ..	...	...	...	..	5	5	...	...	...	...	5	5
Adverse Circumstances (including business anxieties and pecuniary difficulties) ...	...	...	...	...	...	...	...	...	...	...	...	...
Mental Anxiety and Worry and Overwork ...	...	...	...	...	...	...	...	...	...	...	...	...
Religious Excitement ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Love Affairs (including seduction) ...	...	...	...	...	...	...	...	...	...	...	...	...
Fright and Nervous Shock ... ..	...	...	...	...	1	1	...	...	...	...	1	1
<i>Physical.</i>												
Intemperance in Drink ... ..	...	...	...	25	1	26	...	...	...	25	1	26
Venereal Disease ... ..	...	...	...	...	...	...	14	...	14	14	...	14
Self-abuse ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Sunstroke ... ..	...	...	...	1	...	1	...	...	...	1	...	1
Accident or Injury ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Pregnancy ... ..	...	...	...	...	2	2	...	...	...	...	2	2
Parturition and the Puerperal State ...	...	...	...	...	1	1	...	...	...	...	1	1
Uterine and Ovarian Disorders ..	...	...	...	...	3	3	...	...	...	...	3	3
Lactation ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Puberty ... ..	...	...	...	...	1	1	...	...	...	...	1	1
Epilepsy ... ..	...	...	...	...	...	...	3	...	3	3	...	3
Privation and Starvation ... ..	...	...	...	1	...	1	...	...	...	1	...	1
Heart Disease ... ..	...	...	...	...	...	...	5	...	5	5	...	5
Phthisis ... ..	...	...	...	...	...	...	2	...	2	2	...	2
Malarial Fever ... ..	...	...	...	39	3	42	...	...	...	39	3	42
Typhoid Fever ... ..	...	...	...	...	1	1	...	...	...	...	1	1
Other Bodily Diseases or Disorders ...	...	...	...	7	4	11	...	...	...	7	4	11
Previous Attacks ... ..	...	19	5	24	...	...	...	...	...	19	5	24
Old Age ... ..	...	3	1	4	...	...	...	...	...	3	1	4
Morphia Habit ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Hereditary Influences ascertained ...	...	2	3	5	...	...	...	...	...	2	3	5
Congenital Defect ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Indian Hemp Smoking ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Unknown ... ..	...	...	...	...	...	...	...	...	...	22	6	28

\* Where these could not be distinguished. † Some of the discharges are credited with more than one cause; therefore, the sum of the "known" and "unknown" causes exceeds that of the discharges.

TABLE X-c.

## LUNATIC ASYLUM.

Table showing the Probable Causes, Apparent or Assigned, of the Disorders in the Admissions. Discharges and Deaths of the Year 1913.—Continued.

CAUSES.	DEATHS.											
	Number of Instances in which a Cause was Assigned.											
	Deaths:—Male 55. Female 9. Total 64.											
	As Predisposing Cause.			As Exciting Cause.			As Predisposing or Exciting Cause. *			Total. †		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
<i>Moral.</i>												
Domestic Troubles (including loss of relatives and friends) ...	...	...	...	...	...	...	...	...	...	...	...	...
Adverse Circumstances (including business anxieties and pecuniary difficulties) ...	...	...	...	1	...	1	...	...	...	1	...	1
Mental Anxiety and Worry and Overwork ...	...	...	...	...	...	...	...	...	...	...	...	...
Religious Excitement ...	...	...	...	...	...	...	...	...	...	...	...	...
Love Affairs (including seduction) ...	...	...	...	...	...	...	...	...	...	...	...	...
Fright and Nervous Shock ...	...	...	...	...	...	...	...	...	...	...	...	...
<i>Physical.</i>												
Intemperance in Drink ...	...	...	...	1	...	1	...	...	...	1	...	1
Venereal Disease ...	...	...	...	...	...	...	10	2	12	10	2	12
Self-abuse ...	...	...	...	...	...	...	...	...	...	...	...	...
Sunstroke ...	...	...	...	...	...	...	...	...	...	...	...	...
Accident or Injury ...	...	...	...	...	...	...	...	...	...	...	...	...
Pregnancy ...	...	...	...	...	1	1	...	...	...	...	1	1
Parturition and the Puerperal State ...	...	...	...	...	...	...	...	...	...	...	...	...
Uterine and Ovarian Disorders ...	...	...	...	...	...	...	...	...	...	...	...	...
Lactation ..	...	...	...	...	...	...	...	...	...	...	...	...
Puberty ..	...	...	...	...	...	...	...	...	...	...	...	...
Epilepsy ..	...	...	...	...	...	...	1	...	1	1	...	1
Privation and Starvation ...	...	...	...	1	...	1	...	...	...	1	...	1
Heart Disease ..	...	...	...	...	...	...	4	...	4	4	...	4
Phthisis ..	...	...	...	16	2	18	...	...	...	16	2	18
Malarial Fever ...	...	...	...	4	...	4	...	...	...	4	...	4
Typhoid Fever ...	...	...	...	...	...	...	...	...	...	...	...	...
Other Bodily Diseases or Disorders ...	...	...	...	10	1	11	...	...	...	10	1	11
Previous Attacks ...	...	2	2	4	...	...	...	...	...	2	2	4
Old Age ...	...	5	2	7	...	...	...	...	...	5	2	7
Morphia Habit ...	...	...	...	...	...	...	...	...	...	...	...	...
Hereditary Influences ascertained ...	...	...	...	...	...	...	...	...	...	...	...	...
Congenital Defect ..	...	...	...	...	...	...	...	...	...	...	...	...
Indian Hemp Smoking ..	...	...	...	...	...	...	...	...	...	...	...	...
Unknown ...	...	...	...	...	...	...	...	...	...	8	3	11

\* Where these could not be distinguished. † Some of the deaths are credited with more than one cause; therefore, the sum of the "known" and "unknown" causes exceeds that of the deaths.



TABLE XI.

## LUNATIC ASYLUM.

*Showing the Form of Mental Disorder on Admissions and Deaths of the Year 1913, and the Form of Mental Disorder of the Inmates on 31st December, 1913.*

FORM OF MENTAL DISORDER.	Admissions.			Recoveries.			Deaths.			Remaining in Asylum.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Congenital or Infantile Deficiency without Epilepsy ...	...	...	...	...	...	...	1	...	1	9	2	11
Epilepsy acquired ...	4	2	6	1	...	1	1	...	1	16	3	19
General Paralysis of Insane ...	1	3	4	...	...	...	1	2	3	2	1	3
Mania, Acute ...	137	25	162	57	9	66	24	...	24	112	22	134
Do. Acute Delirious ...	1	1	2	...	...	...	1	...	1	...	...	...
Do. Chronic ...	...	1	1	...	...	...	2	2	4	7	5	12
Do. Adolescent ...	1	1	2	...	...	...	...	...	...	1	...	1
Do. Recurrent ...	1	1	2	1	1	2	...	...	...	3	2	5
Do. A Potu ...	24	1	25	20	...	20	...	...	...	1	...	1
Do. Insanity of Pregnancy ...	...	2	2	...	1	1	...	...	...	...	1	1
Do. Puerperal ...	...	...	...	...	...	...	...	...	...	...	...	...
Do. Senile ...	7	3	10	...	...	...	2	1	3	5	2	7
Melancholia, Acute ...	9	5	14	4	4	8	...	...	...	22	3	25
Do. Chronic ...	1	...	1	...	...	...	1	...	1	7	1	8
Do. A Potu ...	1	...	1	1	...	1	...	...	...	...	...	...
Do. Senile ...	...	...	...	...	...	...	...	...	...	1	...	1
Delusional Insanity ...	5	1	6	...	...	...	1	...	1	7	2	9
Dementia, Primary ...	2	...	2	...	...	...	...	...	...	1	...	1
Do. Præcox ...	...	...	...	...	...	...	...	...	...	4	1	5
Do. Secondary ...	2	...	2	3	2	5	1	...	1	39	3	42
Do. Potu ...	...	...	...	...	...	...	...	...	...	2	...	2
Do. Senile ...	1	1	2	...	...	...	2	...	2	2	2	4
Do. Organic ...	12	4	16	...	...	...	18	4	22	146	37	183
TOTAL ...	209	48	257	87	17	104	55	9	64	387	87	474

TABLE XII.  
LUNATIC ASYLUM.  
*Showing Occupation of Admissions.*

Occupation.	Male.	Female.	Total.	Occupation.	Male.	Female.	Total.
				<i>Brought forward ...</i>	90	21	111
Actor ...	2	...	2	Ice Water seller ...	1	...	1
Ayah ...	...	3	3	Lodging-house keeper...	1	...	1
Asst., Drug shop ...	1	...	1	Mandore ...	2	...	2
„ Rubber Estate ...	1	...	1	Mason ...	6	...	6
Bamboo Splitter ...	1	...	1	Merchant ...	1	...	1
Barber ...	1	...	1	Miner, Tin ...	1	...	1
Basket-maker ...	1	...	1	Night-soil carrier ...	1	...	1
Blacksmith ...	1	...	1	Pea seller ...	1	...	1
Boatman ...	5	...	5	Pig breeder ...	1	...	1
Cake-seller ...	5	...	5	Petty trader ...	5	...	5
Carriage builder ...	1	...	1	Physician, Chinese ...	1	...	1
Carpenter ...	4	...	4	Planter, Pepper ...	1	...	1
Cart-driver ...	3	...	3	„ Gambier ...	1	...	1
Clerk ...	5	...	5	„ Nutmeg ...	1	...	1
Clerk, shipping ...	1	...	1	„ Cocoanut ...	1	...	1
Clog-maker ...	1	...	1	„ Pine-apple ...	3	...	3
Cobler ...	1	...	1	Police Constable ...	1	...	1
Coffee seller ...	1	...	1	Prostitute ...	...	1	1
Cook ...	7	...	7	Quarryman ...	1	...	1
Coolie, Coal ...	2	...	2	'Rikisha puller ...	8	...	8
„ Railway ...	1	...	1	Rubber tapper ...	3	...	3
„ Rubber ...	5	1	6	Sawyer ...	2	...	2
„ Rubber Estate ...	3	...	3	Scholar ...	1	...	1
„ Shop ...	4	...	4	Shoe-maker ...	2	...	2
Cowherd ...	1	...	1	Stamp seller ...	1	...	1
Day labourer ...	14	...	14	Stone carrier ...	2	...	2
Dhoby ...	1	...	1	Store-keeper ...	1	...	1
Domestic servant ...	1	1	2	Student ...	1	...	1
Drain cleaner ...	1	...	1	Steersman ...	1	...	1
Farmer, fruit ...	1	...	1	Syce ...	1	...	1
Fisherman ...	2	...	2	Tailor ...	3	...	3
Fish seller ...	1	...	1	Telegraph operator ...	1	...	1
Flower seller ...	1	...	1	Tram conductor ...	1	...	1
Fruit seller ...	1	...	1	Tukang ayer ...	2	...	2
Gardener ...	5	...	5	Vegetable seller ...	3	...	3
Grave digger ...	1	...	1	Wharf Superintendent ...	1	...	1
Grass cutter ...	1	...	1	Wood-cutter ...	1	...	1
Hawker ...	2	...	2	Unknown ...	54	26	80
House wife ...	...	15	15				
Insurance Agent ...	...	1	1				
<i>Carried forward ...</i>	90	21	111	<b>TOTAL ...</b>	209	48	257

## BERI-BERI HOSPITAL, PASIR PANJANG.

REPORT BY DR. H. J. GIBBS, *Medical Officer-in-charge.*

There remained at the end of 1912, 114 patients.

Two hundred and seventy-six were admitted in 1913 of which number 253 were for beri-beri.

The total treated for the year was 390.

Of the 276 admissions 19 were from the General Hospital; 216 from the Tan Tock Seng's Hospital; and 41, mostly relapsed cases of beri-beri, applied at the hospital for admission.

The nationalities of the admissions with their respective numbers were:—Chinese 235, Javanese 28, Eurasians 4, Malays 4, Tamils 3, Malabari 1, Bengali 1.

Of the total treated, 237 were discharged, 8 were transferred, 24 absconded, 11 died.

Of the discharges six had recovered, 225 had improved, and six were removed by their relations and sent to China.

One hundred and ten patients remained in hospital at the end of 1913.

The average daily number was 113.87 and the percentage of deaths to total treated 2.82.

The diseases on admission were:—Beri-beri 253, Malaria 11, Strangulated hernia 1, Pulmonary Tuberculosis 3, Enteric Fever 1, Secondary Syphilis 6, and transverse Myelitis 1.

Thirty-six of the admissions addicted to the opium habit were Chinese.

Three Eurasian patients were transferred from Tan Tock Seng's Hospital suffering from Pulmonary Tuberculosis for open air treatment, but after a few weeks stay they were at their own request returned to the hospital unimproved.

Of the 5 other transfers, one was to the Lunatic Asylum, 3 to the General Hospital for Surgical treatment and the case of transverse myelitis.

*Deaths.*—Eleven deaths occurred from the following causes:—Pneumonia 1, Malaria 2, Beri-beri 2, Enteric Fever 1, Peritonitis 1, Spinal Caries 1, Dysentery 2, and a case of suicide by hanging.

Dysentery of a mild character prevailed to a great extent especially during the second-half of the year; the weather then being very wet. No less than 70 cases occurred with 2 deaths.

*Staff.*—The Matron proceeded to England on long leave on the 2nd June, 1913, her place being taken by Mrs. E. M. NIALL.

There have been two or three changes in the dressers.

## APPENDIX B.

## PENANG.

REPORT BY DR. W. SIDNEY SHEPPARD, *Acting Senior Medical Officer.*

1. The estimated mean population of the Settlement for 1913 was 284,565 (Penang 144,252, Province Wellesley 131,910, Dindings 8,403).

2. The births numbered 7,994 distributed as follows:—

Penang ...	...	...	...	...	3,783
Province Wellesley ...	...	...	...	...	3,954
Dindings ...	...	...	...	...	254

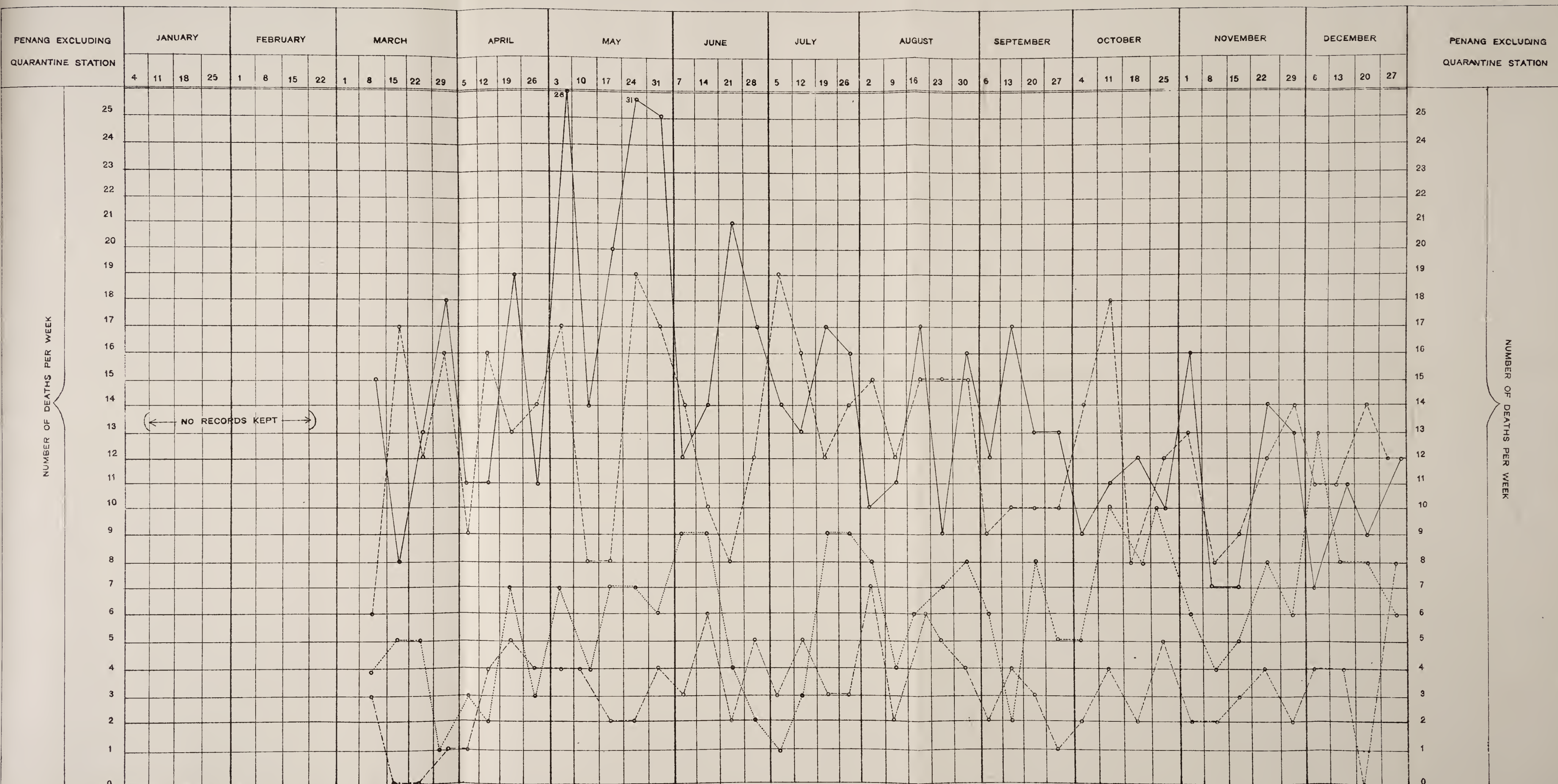
The birth-rate was 28.09 per mille as compared with 29.97 recorded in 1912.

3. The deaths numbered 9,146 distributed as follows:—

Penang ...	...	...	...	...	5,069
Province Wellesley ...	...	...	...	...	3,775
Dindings ...	...	...	...	...	302

The death-rate was 32.14 per mille as compared with 31.64 recorded in 1912. Both birth and death-rates are crude.









The infantile mortality in Penang for the past three years is as under :—

	1911.	1912.	1913.
Deaths under 3 months ...	490	543	592
Deaths between 3 months and 5 years ...	892	699	751

For the first 3 months of life the mortality rate works out at 156·49 per mille.

4. The following table shows the principal causes of death in Penang Island during the years 1905–1913 inclusive:—

Causes of Deaths.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
Malaria ...	661	677	526	820	712	754	953	932	755
Phthisis ...	626	674	641	917	901	738	803	719	668
Beri-beri ...	291	282	212	534	399	367	368	349	310
Fever (unclassified)	608	500	453	444	432	418	455	336	532
Dysentery ...	222	394	289	314	280	289	333	244	169
Convulsions ...	445	343	382	280	313	410	255	238	205
Diarrhœa ...	323	251	211	133	65	121	312	150	133

5. The Chart appended shows in graphic form the weekly incidence of the four most important diseases.

6. The Hospital Returns show a decrease of 89 patients for the year under review: the Out-Door Dispensaries an increase of 547.

7. The Return of Diseases presents no remarkable features. The same diseases in very much the same proportions recur each year. It will be noticed that fewer deaths are recorded from Malaria, Phthisis, Beri-beri and Dysentery. The slight increase of ·5 per thousand in the total death-rate of the Island is accounted for by an increase under the headings: Unclassified Fevers, Old age, Debility, and Pneumonia.

*Malaria.*—Eight hundred and twenty-eight deaths were recorded as against 1,126 in 1912, a substantial improvement. The people are taking to quinine more readily. The price of this drug is rising, unhappily.

The Rural Board activities resulted in :—

- (1) The extension by 60 yards of the drain at Paya Trubong Road.
- (2) The issue of a notice to the owner of a swamp at Tanjong Tokong, calling upon him to fill it up.
- (3) At Bagan Jermal the stream was deepened and drainage thereby greatly facilitated.
- (4) A scheme for the improvement of drainage at Balik Pulau was projected.

Nearly 8 per cent of the 4,362 children examined in the schools showed evidence of malarial infection.

It is gratifying to see the picture illustrating and describing the mosquito-malaria theory hanging on the wall in most of the schools. Some of the teachers and boys can pass a satisfactory examination in the subject, but I know not whether they carry their knowledge into practice.

I find that hardly any of the boys know quinine by sight as the drug was always issued to the schools in solution. I now issue it as powder.

There is still room for better instruction in sanitary matters in the Vernacular Schools. A dresser of Grade I or an Assistant surgeon could be very satisfactorily employed in giving systematic teaching in hygiene in the schools.

*Phthisis.*—The figures show a decrease in the number of deaths. But any observer who knows the crowded houses of the native population and the unsanitary



conditions that obtain in most of them, will not build high hopes thereon. In my opinion a hospital for consumptives would be a great boon to the community.

*Beri-beri*.—This disease also shows a slight decrease in fatality. Three hundred and twenty-six as against 355 deaths in 1912. The highly polished rice that is now proved to be the cause of the disease is still the staple article of diet of the Chinese. As long as this is so, the disease will doubtless continue to flourish. It is interesting to note that at the International Medical Congress in London last year, a Resolution was passed urging the desirability of restricting the preparation and consumption of this rice.

*Dysentery*.—Two hundred and seventy-nine deaths in 1913, as against 390 the year before.

Enteritis and Diarrhœa on the other hand show an increased mortality: 481 deaths as compared with 442 in 1912.

The dividing line between these three diseases is, as my predecessor pointed out last year, not always very clear. The chronic variety of Dysentery tends to merge into the disease which would be called by some observers Diarrhœa, by others remain classified as Dysentery. The two sets of figures should therefore be looked at together.

A great improvement in the health of the estate coolies in Province Wellesley is to be noted under this heading.

The Diarrhœa and Dysentery scourge has, on some estates well-nigh disappeared. The improvement is, in my opinion, due to the operation of the Estates Labourers' Health-Protection Enactment Act and the sanitary activities that have resulted therefrom.

*Venereal Diseases*.—One thousand and fifty-four cases are returned in 1913, as against 881 in 1912.

These figures are not to be taken as a good criterion of the prevalence of these diseases, as many disorders such as Rheumatism, Orchitis, Phagadæna, etc., are really venereal in origin, though they are classified otherwise in the return.

A more comprehensive classification of these disorders would appear to be desirable.

Neo-Salvarsan has proved as successful in local hands as elsewhere. Its cost—about \$3 an injection—has however to be considered and also the fact now established that such rapid cure may result from the remedy that a second successful inoculation of the virus may occur within the short space of a year. Drugs alone, however costly, would thus hardly seem to meet all the demands of the situation.

*Cholera*.—Two suspicious cases were reported, one in the Town and the other at Balik Pulau. The diagnosis was not confirmed by cultures in either case. All due precautions were taken with satisfactory results. Both patients were Tamil coolies. The eating of tainted meat is a common cause of Choleraic Diarrhœa amongst this class and I am strongly inclined to place these cases in that category.

At the new Quarantine Station, Pulau Jerejak, there were 12 cases of Cholera among the coolies landed there. Particulars of these cases will be found in the Port Health Officer's Report.

*Small-pox*.—Fifteen cases occurred during the year. A small outbreak in November amongst the coolies living at Waterfall Road was quickly suppressed.

Eleven cases occurred at the new Quarantine Station, Pulau Jerejak.

*Plague*.—One fatal case occurred at the new Quarantine Station in an Indian immigrant.

No case was recorded in the Settlement.

Sporadic cases of Chicken-pox and Measles occurred both in Penang and at the Quarantine Station.

Three cases of Diphtheria with one death were reported from the General Hospital, Penang.

Dengue fever occurred sporadically during the year.

*Enteric Fever*.—Fifteen sporadic cases with one death are recorded as against eight cases in 1912.

Widal's test was applied in all cases that occurred in hospital.

*Pellagra*.—This disease is at present attracting much attention in Europe and America. It is by no means uncommon in these parts, though hitherto so far as I am aware, it has not found a place in the Return of Diseases. Secondary Syphilis,

Pemphigus, Colitis, Diarrhœa are some of the diseases with which it is confused in the Returns, the two former diagnosis being made when the skin lesions are prominent, and the two latter when as frequently happens the final phase is attended by intestinal symptoms.

I have observed, photographed and recorded in the Medical Press several cases of this disease as found in Singapore and have during the year under review been able to observe a considerable number of cases in the West Indies. In one at least of the Lunatic Asylums in those Colonies the disease is very prevalent and it is of interest to note that the local doctors who have given attention to the subject—Dr. WILLIAMS, Superintendent of the Kingston Lunatic Asylum, for one—are in agreement that the disease is in no way connected with maize-eating. My own observations in this country where maize is very little, if at all consumed confirm this view. As I have stated elsewhere privation of the direst kind appears to be the predisposing cause in most cases, though the wide-spread incidence of the disease in the Kingston Lunatic Asylum would appear to indicate that this is not the only causative factor. A casual visit to the Pauper Hospital here in the month of January, 1914, led to the discovery of one well-marked case. I have no doubt that there are other cases awaiting recognition. My observations do not lead me to believe in its infectivity, though so distinguished an authority as Dr. W. L. SAMBON of the London School of Tropical Medicine strongly supports the view that it is microbic in origin and is propagated by the agency of a fly of the genus *Simulium*.

I have omitted any reference to two important tropical diseases, viz., Ankylostomiasis and Leprosy.

The former is essentially a disease of agricultural districts and the cases recorded in our Penang Hospitals are for the most part those of vagrant coolies who have come to Penang from estates on the mainland and are seeking repatriation. The 106 cases recorded in 1913, as against 82 cases in 1912 must not be taken as indicating any spread of the disease in Penang Island.

During the latter part of the year 4,362 children were examined in the schools at Penang and Lumut. The following observations were made:—

Dental caries present in	...	1,586	or 36·36 per cent children.
Defective vision	...	117	2·68 per cent.
„ hearing	...	84	1·93 per cent.
Adenoids	...	24	0·55
Enlarged Spleen and Malarial Cachexia	...	345	7·91
Vaccination Marks...	{ 3 or more good marks 1,913 or 43·86 per cent. less than 3 good marks 2,022 46·35 per cent. No marks 352 8·07 per cent.		

#### QUARANTINE CAMP, JELUTONG.

REPORT BY DR. W. SYDNEY SHEPPARD, *Acting Chief Medical Officer*.

*Buildings*.—Seven sheds were re-attapped. The Eurasian Ward was repaired. Various other small services were carried out. A good many sheds still remain in a dilapidated condition.

*Grounds*.—During the rainy season there was some flooding in parts of the camp. The mosquito-nuisance was rather a trouble to the inmates of the camp in October and November. I understand that plans for the new camp to be built in 1914, are ready.

*Admissions*.—Fifty cases of Zymotic diseases were admitted during the year. 42 “Contacts” accompanied the sick. There were three deaths, one from cholera, one from small-pox in an unvaccinated infant, and the third from measles complicated by broncho-pneumonia.

Of the fourteen cases of small-pox admitted 5 bore 2 good marks of vaccination, one case had 6 vaccination marks, 8 cases bore no vaccination marks.

Twenty-six small-pox contacts were vaccinated on arrival at camp.



## GENERAL HOSPITAL, PENANG.

REPORT BY DR. W. SYDNEY SHEPPARD, *Acting Senior Medical Officer.*

## STAFF.

Physician	...	...	W. S. SHEPPARD, B.A., M.B., B.Ch. (Cantab.)
Surgeon	...	...	J. GRAY, B.A., M.B., B.Ch., T.C. (Dublin.)
Medical Officer	...	...	W. W. MARTIN, M.B., Ch.B. (Victoria.)
Hon. Ophthalmic Surgeon	...	...	J. KIRK, M.D., C.M. (Edinburgh.)

During 1913, 298 patients were treated in the European wards, and 1,660 in the Native wards as compared with 271 and 1,623, respectively, in 1912.

The mortality, excluding all deaths within 24 hours of admission, was 3·02 per cent for the European wards and 5 per cent for the Native wards as compared with 4·42 per cent for the European and 4·99 per cent for Native wards during the year 1912.

The principal diseases treated were :—

Malaria	...	...	...	33 cases with 14 deaths.
Venereal Disease	...	...	133	„ no „
Dysentery	...	...	26	„ 10 „
Tuberculosis (including Phthisis)	...	...	43	„ 9 „
Beri-beri	...	...	16	„ 3 „

The surgical work of the hospital was in charge of Dr. J. WEBSTER until September. In October Dr. J. GRAY took charge as Senior Surgeon. I append a list of the operations performed during the year.

*Buildings.*—The store has been removed to the old female ward, and the ex-store is to be converted into an office for the Medical Officers, X-ray room, receiving room, etc.

An entrance drive has been constructed to the Nurses' Home and is a great improvement.

A new tiled roof has been put on the European ward.

The European Lunatic Cell has been enclosed by a balcony thereby rendering it more private.

New quarters have been erected for the Dressers at the back of the General Hospital.

A new sterilizer has been added to the theatre-equipment and is working satisfactorily.

*Operations.*—There were 220 operations performed during the year, the chief of which were Laparotomy 5, Appendicostomy 2, opening Liver Abscess 4, Amputations 12, Herniotomy 1, removal malignant Tumours 3, Benign 5, Amputation of Tongue (Epithelioma) 2, Elephantiasis of Scrotum 1, of Vulva 1, trephining mastoid 2, Tracheotomy 2, Radical cure hydrocele 4, Castration 2, and Hare lip 1.

*Staff.*—There have been numerous changes in the staff both amongst the Medical Officers and the Nursing Staff.

*Medical Staff.*—Dr. LOUDON arrived on March 12th relieving Dr. HALL TENNENT who took over duty at the New Quarantine Station.

Dr. MARTIN arrived on April 10th and assumed the duties of Medical Officer, General Hospital, Dr. LOUDON going to the District Hospital.

On July 1st Dr. LOUDON took over duty at the new Quarantine Station, Dr. HALL TENNENT returning to the District Hospital.

Dr. WEBSTER left for home on leave on September 6th and on October 18th Dr. GRAY arrived from Singapore to take up his appointment as Surgeon.

Dr. SHEPPARD arrived on October 8th to relieve Dr. DANE who went home on leave.



Sister SMITH returned from long leave in Europe on January 10th.

Nurse LEICESTER joined as Nurse Probationer on March 21st.

Nurse GIBBS joined as Nurse Probationer on May 26th.

Sister STEPHEN returned from long leave in Europe on June 17th.

Nurse SHARP was transferred to Singapore on August 7th.

Nurse ANGUS was transferred from Singapore to Penang on August 8th.

Nurse SANDAL joined as Nurse Probationer on October 11th.

Dressers PETER JAYASEKARA, AERIA, and BARNABAS have worked throughout the year.

Dresser DANIEL was absent on 3 months' leaves his place being taken by Dresser KANDIAH.

Dresser DEVADASON performed the duties of Laboratory Assistant during the year. He examined 1,339 specimens of blood, urine, fæces, sputum, etc.

#### PRISON HOSPITAL, PENANG.

REPORT BY DR. W. S. SHEPPARD, *Acting Senior Medical Officer.*

The sanitary condition of the Prison was good, and the health of the prisoners was satisfactory.

There remained 16 patients in hospital at the end of 1912.

Two hundred and seventy-seven patients were admitted during the year making a total of 293 treated during the year.

The average daily sick was 13.31.

The principal diseases treated were :—

Malarial Fever	...	...	...	...	17
Anæmia	...	...	...	...	6
Dysentery	...	...	...	...	10
Rheumatism	...	...	...	...	8
Syphilis	...	...	...	...	8
Diarrhœa	...	...	...	...	53
Ankylostomiasis	...	...	...	...	11
Ulcers	...	...	...	...	24
Injuries	...	...	...	...	10

*Mortality.*—There were 9 deaths during the year of which 2 occurred within 24 hours of admission into hospital. None of those who died contracted the disease in prison.

One case of Enteric Fever was admitted to Prison in the incubation period of the disease. He was transferred to the General Hospital.

One prisoner was admitted into hospital on arrival at prison suffering from beri-beri. This was the only case of this disease recorded during the year. The rice used throughout the prison is of the so called "parboiled" variety.

The hospital was vacated during the year while extensive alterations were carried out. Temporary lodgment was found elsewhere in the prison for the sick.

Drs. WEBSTER, MARTIN and Mr. Assistant Surgeon NICHOLSON had charge of the hospital for varying periods during the year.

## DISTRICT HOSPITAL, PENANG.

REPORT BY DR. J. GRAY.

## STAFF :

Resident Medical Officer ... J. LOUDON, M.B., Ch. B. (Liverpool).  
 Resident Assistant Surgeons ... LEICESTER, MITRA, KAR, and LIM  
 CHWEE LEONG.  
 Visiting Surgeon ... J. GRAY, B.A., M.B., B. Ch.  
 Hon. Ophthalmic Surgeon ... J. KIRK, M.D.

*Work done.*—There were 365 patients in hospital at the end of 31st December, 1912.

Four thousand four hundred and ninety cases were admitted during the year including 20 Europeans, making total treated 4,855, the average daily number of sick during the year was 393·28, as compared with 330·92 in 1912.

There were 471 deaths during the year as compared with 523 in the previous year. The percentage of deaths to total treated was 9·70 as compared with 11·34 in the previous year.

Among 471 deaths during the year, 27 died within 48 hours, the percentage of deaths to total treated excluding those was 9·20.

The following table gives the number of cases treated with deaths for some of the important diseases treated during the year :—

Name of Disease.				Number of cases treated.	Number of deaths.	Percentage.
Beri-beri	...	...	...	102	9	8·82
Dysentery	...	...	...	138	47	34·06
Malarial Fever	...	...	...	636	63	9·90
Anæmia	...	...	...	36	3	8·33
Phthisis	...	...	...	165	95	57·57
Diarrhœa	...	...	...	209	84	40·19
Venereal Diseases	...	...	...	914	9	0·98

All serious operation cases are transferred to the wards of the General Hospital.

*Staff.*—Assistant Surgeon N. W. MITRA commenced work from 27th June. Assistant Surgeon B. M. CHOWDHURY resigned on 4th December.

Assistant Surgeon A. J. THUMBU assumed duty on 8th December and was transferred to Singapore on 20th December.

Assistant Surgeon A. J. KARR assumed duty on 20th December.

*Dressers.*—Dresser B. MOEIRA was appointed on 1st April *vice* Dresser GANGATHARAM.

Dresser S. MUTHIA was appointed on 1st November *vice* Dresser PERKINS.

*Malay Student Dressers.*—S. M. OSMAN was appointed on 25th February. A. HAMID was appointed on 28th April.

TABLE A.

Table showing the Admissions and Deaths from the Principal Diseases in the District Hospital, Penang, for the past Four Years.

DISEASES.	1910.			1911.			1912.			1913.		
	No. of Cases Treated.	Died.	Percentage.	No. of Cases Treated.	Died.	Percentage.	No. of Cases Treated.	Died.	Percentage.	No. of Cases Treated.	Died.	Percentage.
Beri-beri	182	38	20.87	127	25	19.68	94	17	18.08	102	9	8.82
Dysentery	202	111	54.95	179	77	43.02	153	65	42.48	138	47	34.06
Malarial Fever	428	50	11.68	647	58	8.96	742	57	7.68	636	63	9.90
Anæmia	179	41	22.90	179	57	31.84	131	45	34.35	36	3	8.33
Phthisis	187	111	59.35	151	92	60.92	202	122	60.39	265	95	57.57
Diarrhœa	129	49	37.98	232	91	39.22	183	84	45.90	209	84	40.19
Veneral Diseases	620	3	0.48	613	6	0.97	688	4	0.58	914	9	0.98



TABLE B.

Return showing the monthly Admissions and Deaths for Beri-beri in the District Hospital, Penang, for the Year 1913.

NATIONALITY.	January.		February.		March.		April.		May.		June.		July.		August.		Septem-ber.		October.		Novem-ber.		Decem-ber.	
	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.		
Chinese	3	1	3	...	3	1	14	1	5	1	5	1	18	2	9	...	7	...	9	1	6	1	2	...
Tamils	...	...	...	...	...	...	...	...	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	
TOTAL	3	1	3	...	3	1	14	1	6	1	6	1	18	2	10	...	7	...	9	1	6	1	2	...
Rainfall	6.15		1.18		3.80		3.39		16.14		10.47		4.58		6.15		22.86		16.88		18.56		4.62	

TABLE C.

*Return of Venereal Diseases admitted into the District Hospital, Penang, for the Year 1913.*

Diseases.			Total Cases treated.	Died.	Remarks.
Gonorrhœa	...	...	110	...	
Do.	Ophthalmia	...	30	...	
Do.	Rheumatism	...	63	...	
Primary Syphilis	...	...	56	...	
Secondary Do.	...	...	276	...	
Tertiary Do.	...	...	50	9	
Bubo	...	...	85	...	
Soft chancre	...	...	157	...	
Phimosis	...	...	25	...	
Paraphimosis	...	..	1	...	
Ulcer Penis	...	...	63	...	
			916	9	

*Nationality Return of the District Hospital, Penang, for the Year 1913.*

Nationality.			Remained.	Admitted.	Total.	Discharged.	Transferred.	Absconded.	Died.	Remaining.
Europeans	...	...	1	20	21	16	2	2	...	1
Eurasians	...	...	2	26	28	16	3	...	2	6
Dutch	...	...	...	5	5	5	...	...	...	...
Chinese	...	...	286	2,769	3,055	2,300	111	52	327	265
Tamils	...	...	56	1,408	1,464	1,251	40	19	112	42
Malays	...	...	7	27	34	27	...	...	...	7
Kling Islam	...	...	11	178	189	138	6	2	25	18
Bengalese	...	...	2	32	34	23	...	...	4	7
Japanese	...	...	...	5	5	4	...	...	...	1
Javanese	...	...	...	5	5	3	...	...	1	1
German	...	...	...	1	1	...	...	1	...	...
Burmese	...	...	...	...	1	1	1	...	...	...
Siamese	...	...	...	2	2	...	...	...	...	2
Singhalese	...	...	...	10	10	6	...	...	...	4
Philippino	...	...	...	1	1	1	...	...	...	2
Total	...	...	365	4,489	4,855	3,791	163	76	471	356

## EYE WARD, DISTRICT HOSPITAL, PENANG.

REPORT BY DR. J. KIRK, *Ophthalmic Surgeon.*

The work has been carried on under my supervision since the middle of last January, when I returned from leave. As in previous years a great many patients arrived in an absolutely incurable condition and had to be at once or later transferred to the blind ward.

There were 288 patients treated during the year as compared with 211 in 1912, of these 70 were out-door patients. These numbers do not include a large number of cases which were sent over from the General Hospital. There were 58 operations performed during the year. The results in most cases were satisfactory although there were a few instances of sepsis especially in out patients. Senior Dresser CARMAGAM continued to be in charge during the year. I am greatly indebted to him for his unfailing industry and carefulness.

## Five Years' Record.

*Cases Treated in the Ophthalmic Ward, District Hospital, Penang.*

Years.				In patients.	Out-door patients.	Surgical cases.	Remarks.
1909	...	...	...	120	18	28	
1910	...	...	...	136	41	46	
1911	...	...	...	140	52	49	
1912	...	...	...	211	22	46	
1913	...	...	...	218	70	58	

## Annual Return of Sick of the Ophthalmic Ward, District Hospital, for 1913.

	Cases.			
Gonorrhœal Ophthalmia	...	...	...	30
Malignant Growth Eye-ball	...	...	...	1
Conjunctivitis (acute catarrhal)	...	...	...	12
Trachoma ...	...	...	...	22
Pterygium ...	...	...	...	3
Keratitis ...	...	...	...	3
Ulcer Cornea	...	...	...	28
Opacity Cornea	...	...	...	13
Staphyloma ...	...	...	...	1
Chronic Iritis	...	...	...	28
Gumma Iris	...	...	...	1
Hypopion ...	...	...	...	1
Optic Atrophy	...	...	...	6
Anæmia of Retina	...	...	...	1
Cataract ...	...	...	...	16
Panophthalmitis	...	...	...	2
Amaurosis ...	...	...	...	31
Lachrymal Abscess	...	...	...	2
Entropion ...	...	...	...	3
Ectropion ...	...	...	...	4

Carried forward ... 208



				<i>Cases.</i>
				—
		<i>Brought forward</i>	..	208
Orbit Cellulitis	...	...	...	1
Contusion Eye-lid	...	...	...	1
Wound of conjunctiva	...	...	...	3
Rupture of Cornea	...	...	...	2
Wound Eye-ball	...	...	...	2
Rupture of Iris	...	...	...	1
				—
		Total	...	218
				—

**Operations performed in the Ophthalmic Ward during the year 1913.**

				<i>Cases.</i>
				—
Sub-Conjunctival Injection	...	...	...	4
Pterygium	...	...	...	7
Iridectomy	...	...	...	2
Cataract	...	...	...	23
Lachrymal abscess incision	...	...	...	2
Removal Foreign body from Eye-lid	...	...	...	2
Removal Foreign body from Cornea	...	...	...	2
Hypopyon (removal of pus from anterior chamber)	...	...	...	1
Tumour Orbit	...	...	...	1
Cauterizing Corneal Ulcer	...	...	...	2
Scraping Eye-lids	...	...	...	4
Ectropion	...	...	...	3
Entropion	...	...	...	1
Enucleation Eye-ball	...	...	...	4
				—
		Total	...	58
				—

**Annual Return of Out-door Cases treated in the Ophthalmic Ward,  
District Hospital, Penang, during the year 1913.**

				<i>Cases.</i>
				—
Gonorrhœal Ophthalmia	...	...	...	4
Conjunctivitis	...	...	...	7
Trachoma	...	...	...	3
Pterygium	...	...	...	3
Keratitis	...	...	...	2
Ulcer Cornea	...	...	...	2
Opacity of Cornea	...	...	...	4
Acute Iritis	...	...	...	9
Chronic Iritis	...	...	...	2
Gonorrhœal Iritis	...	...	...	1
Hypopyon	...	...	...	2
Optic Atrophy	...	...	...	3
Cataract	...	...	...	14
Foreign body in Cornea	...	...	...	2
Foreign body in Eye-lid	...	...	...	2
Perforation of Cornea	...	...	...	1
Rupture Cornea	...	...	...	2
Rupture Iris	...	...	...	2
Injury of Cornea	...	...	...	4
Tubercular Ulcer of Conjunctiva	...	...	...	1
				—
		Total	...	70
				—

## BALIK PULAU HOSPITAL.

REPORT BY DR. W. SYDNEY SHEPPARD, *Senior Medical Officer*.

*Staff*.—Assistant Surgeon MEHTA was in charge from 1st January to 31st January, 1913.

Assistant Surgeon CARNEGUY from 1st February to 31st December, 1913.

Dresser SEATON was attached throughout the year.

Malay Apprentice Dresser ISMAIL (Malacca Scheme) from 7th May to 30th November, 1913.

The staff enjoyed good health during the year.

*Work done*.—Total treated was 352 with daily average of 18·12 as compared with 288 and 25·02 of the preceding year.

Of the 352 patients treated 348 were males and 4 females, 96 were Tamils with 3 females. One being a maternity case.

Forty-two Malays were admitted, 41 males and 1 female.

The latter was a lunatic sent by Police for observation. Of the 41 males, 28 were Police Constables.

The principal diseases treated were:—

Ulcers	...	...	...	...	175	with 1 death.
Phthisis	...	...	...	...	23	„ 10 deaths.
Malaria	...	...	...	...	87	„ 5 „
Dysentery	...	...	...	...	12	„ 5 „
Venereal diseases	...	...	...	...	23	„ 0 „

Seventy-two minor operations were performed, viz.:—

Scraping of Ulcers and Sinuses	...	...	...	42
Incision of Abscess	...	...	...	30
Circumcision	...	...	...	1

*Mortality*.—The death-rate was 8·53 per cent as compared with 9·03 the preceding year.

The death-rate of 8·53 falls to 6·25 per cent by deducting 8 deaths which occurred within 48 hours of admission. Most of the deaths were due to Phthisis, Malaria and Dysentery.

*Infectious Diseases*.—On 18th November a Tamil coolie residing at the Public Works Department Coolie Lines at Sungai Pinang was admitted into hospital in a state of collapse and a history of vomiting and purging for 10 hours. The usual precautions were taken and no further cases occurred.

*Out-door Dispensary*.—During the year 736 patients sought treatment as compared with 413 in the preceding year.

*Work done*.—

			1912.	1913.
			—	—
Number of patients	...	...	423	736
Visits	...	...	824	1,369
Indigent patients	...	...	51	51
Government servants	...	...	135	193
Paying patients	...	...	227	495
Males	...	...	318	510
Females	...	...	95	226
Average number of visits per diem	...	...	2·25	3·72
Receipts for the year	...	...	\$54·75	\$119·30

*Nationalities of those treated.*

	1913.			1912.
	Males.	Females.	Total.	
Europeans ... ..	5	2	7	9
Eurasians ... ..	11	4	15	16
Chinese ... ..	299	179	478	228
Malays ... ..	124	18	142	80
Indians ... ..	68	19	87	79
Others ... ..	3	4	7	1

**LUMUT HOSPITAL, DINDINGS.**REPORT BY DR. W. S. SHEPPARD, *Senior Medical Officer.*

*Work done.*—Three hundred and fifty-nine cases were admitted during the year which, with 14 remaining from previous year, make a total of 373 cases treated. This is less by 27 than the previous year. The principal disease treated was Malarial Fever, of which there were 154 cases with 9 deaths, as compared with 158 cases and 21 deaths during 1912.

Venereal Diseases accounted for 19 admissions.

The average daily sick was 11·65.

*Mortality.*—There were 40 deaths during the year, of this number 13 died within 48 hours of admission. The principal causes of death were:—

Dysentery ... ..	...	...	...	9
Malaria ... ..	...	...	...	9
Phthisis ... ..	...	...	...	4
Diarrhœa ... ..	...	...	...	4
Ankylostomiasis ... ..	...	...	...	3

The percentage of deaths to total treated was 10·72.

The percentage of deaths to total treated excluding those dying within 48 hours of admission was 7·80.

The admissions and deaths were made up as follows:—

	<i>Admissions.</i>		<i>Deaths.</i>	
District of Dindings ... ..	...	267	...	32
Sitiawan and Lower Perak ... ..	...	92	...	8
Total ... ..	...	359	...	40

*Infectious Disease.*—There have been no infectious diseases during the year.

*Police.*—The health of the Malay Contingent has been good. There were 12 admissions to the hospital and 34 were treated as out-patients. No death occurred amongst them.

*The Out-door Dispensary.*—The number of cases treated during the year was 721, against 586 in the previous year; this shows 135 more than previous year. Three hundred and twenty-seven cases were treated for fever. Of the number 721, 688 were from the District of Dindings and 33 from Sitiawan.

The receipts for the year amounted to \$76.85.

*Vaccinations.*—Two hundred and forty-two children were vaccinated during the year with 39 failures.

*Staff.*—Messrs FERNANDEZ, DUTTA, SEN, MEHTA, and SINHA did duty as Assistant Surgeon for varying periods during the year. The Dressers were stationed according to the settled roster.



## LEPER ASYLUM, PULAU JEREJAK.

REPORT BY DR. F. R. SAYERS, *Medical Officer-in-charge.*

1. <i>Statistics.</i> —Remained on 31st Decem-ber, 1912	...	...	...	<div> <div>Colonial 193</div> <div>Perak 210</div> <div>Selangor 23</div> <div>Kedah 2</div> </div>	... 428
Admitted during 1913	...	...	...	<div> <div>Colonial 99</div> <div>Perak 42</div> <div>Selangor Nil</div> <div>Kedah 1</div> </div>	... 142
					<hr/>
Total inmates					... 570 <hr/>
Discharged	...	...	...	Perak 1	
Transferred	...	...	...	Colonial 1	
Absconded	...	...	...	<div> <div>Colonial 7</div> <div>Perak 2</div> </div>	... 9
Died	...	...	...	<div> <div>Colonial 96</div> <div>Perak 84</div> <div>Selangor 8</div> <div>Kedah 1</div> </div>	... 189
Remaining on 31st December, 1913	...	...	...	<div> <div>Colonial 188</div> <div>Perak 165</div> <div>Selangor 18</div> <div>Kedah 2</div> </div>	... 373

The average daily number of inmates was 397.06. The percentage of death was 33.15. One Indian leper committed suicide by hanging.

*Visits.*—Official visits were made during the year by:—The Hon'ble Principal Civil Medical Officer, Straits Settlements, the Principal Medical Officer, Federated Malay States, the Senior Medical Officer, Penang.

The lepers received the usual New Year gifts of 25 cents per man.

*Personnel.*—Mr. J. R. BRUCE continued as Assistant Surgeon. Colonial Dressers FUM THEAM FOOK and R. KESAVEN were transferred during the year and replaced by Dressers L. A. PETERSON and W. W. GASPER. Perak Dressers—V. SITHAMPARAM PILLAY, S. S. MANCAM, V. S. KULANDAVELLO PILLAY and G. SINGARAM, were transferred and replaced by Dressers C. PONNIAH, GOH CHENG HOCK, and V. VELU PILLAY. Selangor Dresser M. SINNATAMBY was also transferred and replaced by J. V. THAMBY PILLAY.

The tables appended are:—

*A.*—Giving the number of admissions, total number of inmates, the number of deaths and the daily average for the last 23 years.

*B.*—Showing the number of inmates with the daily average in each month of the year.

*C.*—Showing the admissions, deaths, discharges and abscondings among Colonial, Perak, Selangor and Kedah lepers in each month.

*D.*—Giving the nationality of the inmates.

*E.*—Showing occupation of inmates previous to admission.

A Baptist Chapel has been completed for the use of lepers of that persuasion.

Treatment with Benzoyl Chloride has been discontinued as the results were unsatisfactory. Local treatment only was possible as the patients refused internal administration.

A supply of "Nastin" sufficient for the treatment of 10 cases has been obtained and will be tried.

TABLE A.

*Showing the Number of Admissions, Total Number of Inmates, the Number of Deaths and the Daily Average for the last 23 Years.*

Years.	Remained from previous years.	ADMISSIONS.				Total.	Deaths.	Percentage of deaths.	Daily Average.
		Colonial.	Perak.	Selangor.	Kedah.				
1891	...	221	132	...	...	353	123	34·84	195·07
1892	...	137	178	110	...	475	122	25·68	282·96
1893	...	310	118	4	...	432	87	20·13	307·80
1894	...	321	111	60	...	492	129	26·21	311·18
1895	...	332	121	34	...	487	146	29·97	313·06
1896	...	301	145	24	...	470	136	28·93	303·37
1897	...	286	152	...	...	438	130	29·68	278·64
1898	...	253	152	16	...	421	123	29·21	262·10
1899	...	247	123	20	...	390	142	36·41	239·15
1900	...	214	97	59	...	370	115	31·08	214·15
1901	...	233	80	29	...	342	88	25·73	233·35
1902	...	235	84	33	...	352	73	20·73	243·27
1903	...	244	119	71	...	434	84	19·35	264·53
1904	...	334	92	42	...	468	140	29·91	311·02
1905	...	282	148	36	...	466	78	16·73	319·73
1906	...	357	107	32	...	496	138	27·82	344·30
1907	...	336	100	52	...	488	110	22·54	361·74
1908	...	356	98	52	...	506	107	21·15	383·73
1909	...	370	90	117	...	577	134	23·22	396·67
1910	...	420	97	94	...	611	186	30·44	413·83
1911	...	385	76	90	50	601	157	26·12	404·37
1912	...	421	90	79	1	597	138	23·11	417·78
1913	...	428	99	42	...	570	189	33·15	397·06

TABLE B.

*Showing the Number of Inmates during 1913.*

Months.				Total treated.	Daily average.
January	...	...	...	433	422·45
February	...	...	...	431	421·03
March	...	...	...	439	414·05
April	...	...	...	430	419·66
May	...	...	...	425	414·03
June	...	...	...	413	403·93
July	...	...	...	408	386·22
August	...	...	...	409	388·48
September	...	...	...	389	377·80
October	...	...	...	402	375·25
November	...	...	...	389	376·17
December	...	...	...	387	368·03

TABLE C.

Showing the Admissions, Deaths, Discharged, Transferred and Absconded among Colonial, Perak, Selangor and Kedah Lepers in each Month for the Year 1913.

MONTHS.	Total Admissions.	ADMISSIONS.				DEATHS.				DISCHARGED.				TRANSFERRED.				ABSCONDED.			
		Colonial.	Perak.	Selangor.	Kedah.	Colonial.	Perak.	Selangor.	Kedah.	Colonial.	Perak.	Selangor.	Kedah.	Colonial.	Perak.	Selangor.	Kedah.	Colonial.	Perak.	Selangor.	Kedah.
January	5	4	...	...	1	3	7	3	...	...	...	...	...	...	...	...	...	...	...	...	...
February	11	11	...	...	...	5	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...
March	17	17	...	...	...	3	8	...	...	...	1	...	...	4	1	...	...	...	...	...	...
April	8	7	1	...	...	6	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...
May	6	...	...	...	...	12	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...
June	5	5	...	...	...	9	7	1	...	...	...	...	...	...	...	...	...	...	...	...	...
July	12	7	5	...	...	13	10	...	1	...	...	...	...	1	...	...	...	...	...	...	...
August	26	15	11	...	...	19	7	1	...	...	...	...	...	...	...	...	...	...	...	...	...
September	8	8	...	...	...	8	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...
October	25	...	25	...	...	9	8	1	...	...	...	...	...	...	...	...	...	...	...	...	...
November	6	6	...	...	...	3	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...
December	13	13	...	...	...	6	9	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	142	93	42	...	1	96	84	8	1	...	1	...	...	1	2	...	...	7	2	...	...



TABLE D.

*Showing the Nationalities of Inmates.*

Nationalities.	Colonial.	Perak.	Selangor.	Kedah.	Total number.
Chinese ...	259	228	20	3	510
Eurasian ...	1	...	...	...	1
Malays ...	3	...	1	...	4
Indian, Islam ...	4	...	...	...	4
Tamils ...	24	24	2	...	50
Javanese ...	1	...	...	...	1
Total ...	292	252	23	3	570

TABLE E.

*Showing the previous Occupation of Inmates for the Year 1913.*

—	Colonial.	Perak.	Selangor.	Kedah.	Total number.
Actor ...	2	...	...	...	2
Barber ...	1	2	...	...	3
Basket-maker ...	2	3	...	...	5
Beggars ...	2	...	...	...	2
Boatmen ...	7	...	...	...	7
Blacksmith ...	8	3	1	...	12
Butcher ...	...	...	1	...	1
Cart-driver ...	3	3	...	...	6
Carpenter ...	14	6	1	...	21
Cook ...	9	...	...	...	9
Cake-seller ...	2	1	...	...	3
Dhoby ...	2	...	...	...	2
Engine-driver ...	...	1	...	...	1
Fireman ...	3	1	...	...	4
Fitter ...	1	1	...	...	2
Fortune teller ...	...	1	...	...	1
Gardener (vegetable) ...	10	17	1	1	29
General coolies ...	152	67	3	1	223
Goldsmith ...	2	...	...	...	2
Hawker ...	6	1	...	...	7
Mason ...	3	2	...	...	5
Miner (tin) ...	6	116	14	1	137
Painter ...	6	1	...	...	7
Planter ...	...	1	...	...	1
Police Constable ...	1	...	...	...	1
Post-peon ...	1	...	...	...	1
'Rikisha puller ...	11	...	...	...	11
Shoe-maker ...	1	2	...	...	3
Shop-keeper ...	1	1	...	...	2
Syce ...	1	...	...	...	1
Tailor ...	6	2	...	...	8
Tin maker ...	2	...	...	...	2
Trader ...	...	1	1	...	2
Vegetable Seller ...	2	...	...	...	2
Wood-cutter ...	7	12	1	...	20
Nil. ...	18	7	...	...	25
Total ...	292	252	23	3	570

Annual Return of Admissions and Deaths, of the Leper Asylum, Pulau Jerejak, 1913.

	January.		February.		March.		April.		May.		June.		July.		August.		Septem-ber.		October.		Novem-ber.		Decem-ber.		Total.	
	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
Leprosy N.	...	3	7	3	9	4	3	6	2	9	1	6	5	10	11	12	3	6	10	8	1	5	8	8	60	80
" A.	2	8	3	3	4	5	3	4	4	3	3	11	5	12	13	9	5	5	10	6	2	9	2	8	56	83
" M.	3	2	1	1	4	2	2	1	...	4	1	...	2	2	2	7	...	1	5	4	3	1	3	1	26	26
Total ...	5	13	11	7	17	11	8	11	6	16	5	17	12	24	26	28	8	12	25	18	6	15	13	17	142	189

## APPENDIX C.

## PROVINCE WELLESLEY.

REPORT BY DR. R. D. FITZGERALD, *Medical Officer*.

1. Dr. R. D. FITZGERALD was in charge throughout the year.
2. The health of Province Wellesley has been good. Small-pox was prevalent on the South-West boundary during the months of August, September, October and November. The number of cases was limited to 50.
3. The registered births numbered 3,957 compared with 4,456 of 1912, and the registered deaths numbered 3,775 compared with 3,679 of 1912.  
The estimated population was 130,300.
4. The figures for 1913 show a further decrease in the number of bowel diseases. Phthisis remains high. The mortality for Malarial Fever remains much the same.  
Ankylostomiasis—Admissions 322  
Deaths 55
5. The following public health improvements have been carried out by the Rural Board.
  - (a) The unsanitary village of Jawi has been demolished.
  - (b) Latrines have been erected at Jawi Temple for the use of those attending.
  - (c) A filthy village of some 50 houses on Krian Estate bordering the main road to Nibong Tebal has been destroyed.
  - (d) The village of Kapala Batas is undergoing many improvements in its housing and drainage.
  - (e) The swamp at Bagan Tuan Kechil is being filled in.
  - (f) New water pipes are being laid to carry the Bukit Seraya water to Kuala Prai.
  - (g) Bukit Panchor water has been analysed regularly throughout the year. The samples analysed early in the year showed a great improvement to 1912. Since then the analyses have been constant. The sudden improvement was due to the fact that a considerable amount of vegetable matter was removed from the Kedah end of the Reservoir and also to the fact that the sub-strata of water was drawn off.

Analysis of water taken from the inlets shows a better quality than the water taken from the reservoir itself.

6. The swamp adjoining Butterworth Hospital has been searched for anopheles. After many searches only a few larvæ were obtained, and these on hatching out proved to be *M. Rossi*, non-malarial carriers.

Only one case of Malaria Fever has arisen *de novo* in Butterworth Hospital during the year.

Early in the year Dr. KEITH visited and inspected the swamp.

7. Vaccinations by Gurus have been carried out throughout the year. Forty-four Gurus obtained certificates to vaccinate.

The following figures show the work done:—

Number Vaccinated.	Perfect.	Modified.	Failed.	Not seen.	Percentage of successful vaccinations.
3,723	2,627	213	808	75	70.06 per cent.



8. *Epidemics.*—

(a) In the beginning of August, small-pox was reported in the South-West District, between the Perak boundary and the village of Sungai Acheh.

Total number of cases	...	...	...	50
„ deaths	...	...	...	15
Number of confluent cases	...	...	...	7

Of the 7 cases of confluent 5 died, these 5 had no marks of vaccination, 2 cases recovered one of which had marks of recent vaccination, the other no marks. Eight cases of discrete died, 3 of which had no marks, 3 marks of recent vaccination and one modified.

(b) In September small-pox occurred at Changkat. These cases were removed at once to Sungai Bakap Quarantine Camp.

Total number of cases	...	...	...	7
„ deaths	...	...	...	2, one with no marks of vaccination.

(c) In October 4 cases occurred at Goa Ipoh, Province Wellesley, North. These cases were removed to Butterworth Quarantine Camp.

Total number of cases	...	...	...	4
„ deaths	...	...	...	1 with no marks of vaccination.

9. Special accommodation has now been made for Malay patients in our hospitals. This has been accomplished by screening off parts of wards. Special kitchens and cooking arrangements have been made. The scheme is bearing fruit, as we now get more Malays to come to hospital.

10. *Inspection of School Children.*—In the latter part of the year an inspection was made of all Malay school children in Province Wellesley. The following figures are the statistics of the inspection:—

Number of children examined	...	{ Male 2,369 Female 201 }	Total 2,570.
Dental Caries	...	...	743 (28·9 per cent)
Diseases of the Eye	...	...	9 (0·38 „ )
Diseases of the Ear	...	...	4 (0·15 „ )
Hypertrophy of Tonsils	...	...	486 (18·91 „ )
Adenoids	...	...	55 (2·14 „ )
Enlarged spleen	...	...	194 (7·54 „ )
Epilepsy	...	...	3 (0·11 „ )
Vaccination Marks	3 or more good marks	...	1,329 (55·71 „ )
	Less than 3 marks	...	749 (29·14 „ )
	No marks	...	492 (19·14 „ )

*Deformities.*

Infantile Paralysis	...	...	...	1
Hemiplegia	...	...	...	1
Cleft Palate	...	...	...	1
Hair lip	...	...	...	3
Double uvula	...	...	...	1
Rhinophima	...	...	...	1
Mal-united fracture	...	...	...	1

Total ... 9 ( 0·35 per cent).

11. The Principal Civil Medical Officer, Dr. ELLIS, visited the Province in June and December.

In June much of his attention was given to the water supply of the Southern District and to the suggested Isolation Hospital, so much needed at Bukit Mertajam.

At his December inspection he drew attention to many minor improvements necessary to be done to the buildings in the hospitals.

12. There were many changes in the staff of Assistant Surgeons during the year. This was due to the new scheme of sending an Assistant Surgeon to do duty at the Dindings for a period of three months.

The following did excellent work during their terms of office :—Assistant Surgeons DUTTA, SINHA, MEHTA, MITRA, SEN and FERNANDEZ.

### BUTTERWORTH HOSPITAL.

*Buildings.*—The Quarantine Camp has been completed and provided with a system of impermeable drains. There are 4 sheds which are separated from one another by a wire fencing.

A new ward has been erected, and quarters for 4 hospital attendants. One store room has been converted into a Malay kitchen, another into a latrine.

*Work done.*—On the 1st of January, 1913, there were 40 cases under treatment. During the year 990 cases were admitted (males 904 and females 86) making a total of 1,030.

The average daily sick was :—

Males	...	...	...	46.62
Females	...	...	...	4.78

There were 81 deaths (males 77 and females 4).

The percentage of deaths to total treated being 7.86. Eighteen died within 48 hours of admission.

The principal diseases treated were :—

			<i>Number of cases.</i>	<i>Deaths.</i>	<i>Mortality%.</i>
			—	—	—
Ankylostomiasis	...	...	85	17	20
Beri-beri	...	...	13	...	...
Diarrhœa	...	...	9	3	33.33
Dysentery	...	...	44	10	22.72
Enteric Fever	...	...	1	1	100
Gonorrhœa	...	...	34	...	...
Leprosy	...	...	4	...	...
Malaria	...	...	136	9	6.61
Nephritis	...	...	5	2	40
New Growths	...	...	3	2	66.66
Pneumonia	...	...	9	6	66.66
Small-pox	...	...	5	1	20
Soft Chancres	...	...	41	...	...
Syphilis	...	...	88	1	1.13
Tuberculosis	...	...	1	1	100
Valvular Disease of Heart	...	...	9	2	22.22
Wounds	...	...	153	...	...
Yaws	...	...	1	...	...

*Necropsies.*—Twenty-eight necropsies were performed during the year, the Police having sent in 19 bodies.

*Operations.*—One hundred and forty-five operations were performed during the year as follows:—

Removal of Tumours	...	..	...	...	3
Amputations	...	...	...	...	4
Trephining	...	...	...	...	1
Laparotomy	...	...	...	...	2
Herniotomy	...	...	..	...	2
Radical Cure Hydrocele		...	...	...	2
Setting fractures	...	...	...	...	5
Castration	...	...	...	...	1
Minor operations	...	...	...	...	128

All the minor operations were done under chloroform.

Microscopical examination of the blood in all fever cases has been carried out throughout the year. The stools, urine, and sputa of a large number of patients have also been microscopically examined.

*Out-door Dispensary.*—The number of patients treated at the out-door dispensary was 1,305 as against 1,056 in 1912.

The receipts amounted to \$201.02 as against \$148.92 in 1912.

Those treated included:—

					<i>Males.</i>	<i>Females.</i>
					—	—
Europeans	...	...	...	...	47	28
Eurasians	...	...	...	...	58	30
Chinese	...	...	...	...	301	14
Malays	...	...	...	...	257	19
Indians	...	...	...	...	480	59
Others	...	...	...	...	12	...
					—	—
			Total	...	1,155	150
					—	—

The principal diseases treated were:—

Malaria	...	...	...	...	...	156
Syphilis	...	...	...	...	...	68
Anæmia	...	...	...	...	...	8
Diarrhœa	...	...	...	...	...	25
Wounds	...	...	...	...	...	414
Ankylostomiasis	...	...	...	...	...	1
Ascaris lumbricoides	...	...	...	...	...	19
Scabies	...	...	...	...	...	22

*Medico-legal.*—The Coroner sent in 19 cases for post-mortem examination.

The Police sent in 17 persons for observation of their mental condition.

Medical evidence was given at the Police Courts on 22 occasions.

Forty-seven recruits for the Police Force were examined.



# BUKIT MERTA JAM HOSPITAL.

1. *Buildings*.—During the year the operation theatre was enlarged. The Assistant Surgeon's and the Dressers' quarters were renovated. New quarters for the Senior Dresser were erected.

2. *Work-done*.—The following figures summarise the work done:—

Remaining from 1912	...	...	...	...	68
Admitted	...	...	...	...	1,725
Total treated	...	...	...	...	1,793
Discharged	...	...	...	...	1,570
Died	...	...	...	...	157

Throughout the year the hospital was taxed to its utmost capacity and on a few occasions it was overcrowded. The Railway Ward which has been erected during the early part of the year was usually overcrowded.

The number of paying patients was 66 as compared with 83 of last year, while the estate coolies numbered 196 as compared with 281 of the preceding year.

The death-rate was 8.75. Excluding deaths which occurred within 48 hours, the death-rate falls to 6.94.

3. The principal diseases treated were:—

Dysentery	...	...	...	86 with 19 deaths.
Gonorrhœa	...	..	...	32
Malaria Fever	...	...	...	282 with 16 deaths.
Pneumonia	...	...	...	23 „ 3 „
Syphilis	...	...	...	155 „ 1 death.
Malignant tumours	...	...	...	5 „ 2 deaths.
Heart disease	...	...	...	19 „ 3 „
Phthisis	...	...	...	39 „ 24 „
Nephritis	...	...	...	34 „ 11 „
Injuries	...	...	...	214 „ 6 „
Soft chancres	...	...	...	46
Ankylostomiasis	...	..	...	189 „ 27 „
Enteritis	...	...	...	29 „ 8 „

4. An examination of stools was made in most of the cases admitted to the hospital with the result that 189 cases proved to be of Ankylostomiasis showing an increase of 61 cases to that of the preceding year. The death-rate in Ankylostomiasis was 14.28.

Blood examination was made in every case of fever and anæmia with the result that malarial parasites were found in 281 cases—an increase of 67 malarial patients.

5. During the year 49 post-mortem examinations were made on patients dying in hospital.

6. The following operations were performed:—

Amputations	...	...	...	...	3
Removal of tumours	...	...	...	...	4
Cataract	...	...	...	...	1
Excision of Eye	...	...	...	...	1
Herniotomy	...	...	...	...	2
Elevation of Fracture of Skull	...	...	...	...	1
Sequestrotomy	...	...	...	...	11
Minor operations	...	...	...	...	152

*Out-patient Department*.—The number of patients who sought for out-door treatment was 3,070 showing an increase of 406 patients to that of 1912. In addition to this number 85 cases were brought by the Police and treated as out-door patients. The receipts amounted to \$413.63 as compared with \$420.70 of the preceding year.

The nationalities of the patients were:—

Europeans	...	...	...	...	...	56
Eurasians	...	...	...	...	...	83
Chinese	...	...	...	...	...	1,185
Malays	...	...	...	...	...	215
Indians	...	...	...	...	...	1,498
Others	...	...	...	...	...	33

The principal diseases treated were:—

Dysentery	...	...	...	...	...	50
Gonorrhœa	...	...	...	...	...	32
Malaria Fever	...	...	...	...	...	304
Pyrexia	...	...	...	...	...	423
Rheumatism	...	...	...	...	...	69
Primary Syphilis	...	...	...	...	...	35
Secondary Syphilis	...	...	...	...	...	196
Anæmia	...	...	...	...	...	7
Neuralgia	...	...	...	...	...	33
Cephalalgia	...	...	...	...	...	32
Conjunctivitis	...	...	...	...	...	31
Otitis	...	...	...	...	...	47
Asthma	...	...	...	...	...	37
Bronchitis	...	...	...	...	...	214
Caries tooth	...	...	...	...	...	22
Indigestion	...	...	...	...	...	81
Constipation	...	...	...	...	...	77
Diarrhœa	...	...	...	...	...	46
Intestinal Colic	...	...	...	...	...	20
Dysmenorrhœa	...	...	...	...	...	19
Abscess	...	...	...	...	...	54
Eczema	...	...	...	...	...	65
Contused wounds	...	...	...	...	...	499
Worms (intestinal)	...	...	...	...	...	67

*Medico-legal.*—The Coroner sent in 19 bodies. The Police sent in 121 assault cases of which 36 were admitted to hospital.

#### SUNGAI BAKAP HOSPITAL.

1. *Buildings and Grounds.*—Both have been in good order throughout the year. A new operation theatre has been erected but is not yet ready for occupation. No special minor works have been done, only a few repairs to the broken cemented drains round the hospital.

2. *Work done.*—The following figures represent the work done.

Twenty-seven patients remained in the hospital at the beginning of the year.

Nine hundred and fifty-two admissions during the year, making a total of 979 treated. The average daily number of sick was 42·64. Number of deaths 96. The percentage of deaths to total treated was 9·80.

Twenty-eight deaths within 48 hours of admission. The percentage of deaths to total treated excluding those dying within 48 hours of admission was 7·15. Forty-eight patients remained in the hospital at the end of the year.

3. The principal diseases treated with deaths and percentage of mortality from each cause:—

<i>Diseases.</i>	<i>No. of cases.</i>	<i>No. of deaths.</i>	<i>Mortality %.</i>
Ankylostomiasis ...	71	11	15·49
Beri-beri ...	11	1	9·09
Diarrhœa ...	5	3	60·00
Dysentery ...	62	21	33·87
Gonorrhœa ...	48	...	...
Leprosy ...	8	...	...
Malaria ...	151	6	3·97
Nephritis ...	7	1	14·28
New-growth (malignant) ...	5	4	80·00
Pneumonia ...	5	3	60·00
Small-pox ...	61	1	16·66
Soft Chancre ...	55	...	...
Syphilis ...	81	2	2·46
Tuberculosis ...	33	15	45·45
Valvular Disease of heart ...	8	5	62·50
Wounds ...	145	1	0·68
Yaws ...	1	...	...

4. *Necropsies.*—Twenty-three necropsies on patients dying in the hospital were performed during the year.

5. *Operations.*—Sixty-two operations were performed during the year under general and local anæsthesia.

	Nature of operation.	No. of cases.
On Tumours ...	Enucleation of non-malignant growth ...	3
„ ...	Excision and curetting of malignant growth	1
„ ...	Excision of Cyst ...	1
Bones ...	Removal of Sequestra of Necrosis ...	2
Joint ...	Arthrectomy for tuberculous disease ...	2
Amputation ...	Amputation of thigh for septic knee ...	1
On Abdomen ...	Laparotomy for intestinal obstruction ...	1
„ ...	Laparotomy and excision of a portion of small intestine for Volvulus ...	1
„ ...	Herniotomy for strangulated Inguinal Hernia	1
„ ...	Radical cure for Inguinal Hernia ...	1
Anus ...	Ligature of Hæmorrhoids ...	1
Urethra ...	Dilatation of stricture ...	2
	Radical cure for Hydrocele ...	1
	Ovariectomy ...	1
Female Generative organs ...	Minor operations ...	43
	Total ...	62



6. *Out-door Dispensary*.—Nine hundred and four patients were treated during the year as compared with 749 in 1912. The collection amounted to \$167.24 as compared with \$128.10 in 1912.

The nationalities of the out-patients treated were as follows:—

					Males.	Females.
					—	—
Europeans	...	...	...	...	13	4
Eurasians	...	...	...	...	8	2
Chinese	...	...	...	...	431	142
Malays	...	...	...	...	62	18
Natives of India	...	...	...	...	141	39
Others	...	...	...	...	25	19
					—	—
				Total	...	680 224
					—	—

The principal diseases treated were as follows:—

Disease.						No. of cases.
—						—
Anæmia	...	...	...	...	...	7
Beri-beri	...	...	...	...	...	3
Diarrhœa	...	...	...	...	...	7
Dysentery	...	...	...	...	...	9
Gonorrhœa	...	...	...	...	...	14
Helminthiasis	...	...	...	...	...	5
Malaria	...	...	...	...	...	105
Pneumonia	...	...	...	...	...	1
Soft Chancre	...	...	...	...	...	28
Syphilis	...	...	...	...	...	71
Tuberculosis	...	...	...	...	...	9
Valvular Disease of heart	...	...	...	...	...	6
Wounds	...	...	...	...	...	212
Yaws	...	...	...	...	...	1

7. *Medico-legal*.—The Coroner sent in 28 dead bodies for post-mortem examination. Twenty-eight inquests were held. Thirteen verdicts were returned of deaths from natural causes, 3 of homicide, 6 of suicide and 6 of accidental deaths.

The Police sent up 146 cases for examination and treatment including 6 for observation of insanity and 7 for leprosy.

Medical evidence was given in the Courts on 16 occasions.

8. *Vaccination*.—One thousand eight hundred and eighty-three children were vaccinated in the Southern District, of these 1,436 were vaccinated by Gurus, and 447 by the Government vaccinator. In the former there were 249 failures and in the latter 91 making a total of 340 failures.

There are 8 Gurus vaccinating in this District.

In addition to the above vaccinations, 1,435 persons were vaccinated in connection with the outbreak of small-pox on the southern boundary and at Changkat.

#### OUT-DOOR DISPENSARY, NIBONG TEBAL.

1. *Buildings*.—The Dispensary has been opened in the witness room of the Court house at Nibong Tebal. It is occupied during the Dispensary hours by the Medical Department and during the Court hours by the witnesses as there is no other room available.

2. *Staff*.—The Assistant Surgeon from the Sungai Bakap Hospital has been attending the dispensary with a dresser and an attendant taken from the hospital.

3. *Work done.*—The Dispensary was opened 114 days in the year commencing from 18th February, 1913. From February to July, it worked 2 days a week, namely, Tuesday and Thursday, from 8 to 10 A.M., and since August Friday was added from 3 to 5 P.M. The number of patients who attended the Dispensary was 596. Of these 314 were Government officers inclusive of their families, 235 paying, and the remaining 47 were indigent patients. One thousand one hundred and four visits were paid in all by the patients. The daily average number of visits was 9.68. The collection amounted to \$53.20. The drugs and dressings were supplied from Sungai Bakap Hospital.

The nationalities of the out-patients treated are as follows:—

				<i>Male.</i>	<i>Female.</i>
				—	—
Europeans ...	...	...	...	1	1
Eurasians ...	...	...	...	46	6
Chinese ...	...	...	...	159	42
Malays ...	...	...	...	103	6
Natives of India ...	...	...	...	192	35
Others ...	...	...	...	5	...
			Total ...	<u>506</u>	<u>90</u>

The principal diseases treated were as follows:—

<i>Diseases.</i>					<i>Number of cases.</i>
—					—
Anæmia ...	...	...	...	...	4
Beri-beri ...	...	...	...	...	3
Diarrhœa ...	...	...	...	...	9
Dysentery ...	...	...	...	...	6
Gonorrhœa ...	...	...	...	...	12
Helminthiasis ...	...	...	...	...	11
Malaria ...	...	...	...	...	58
Soft Chancre ...	...	...	...	...	4
Syphilis ...	...	...	...	...	25
Tuberculosis ...	...	...	...	...	6
Wounds ...	...	...	...	...	132

#### ESTATES AND ESTATE HOSPITALS.

Throughout the year the Province Estates were visited from time to time and reports made to the Senior Medical Officer, Penang.

A vast improvement has been made on the estates in the housing of the coolies, system of drainage, latrine accommodation and scavenging.

Appended is a short statement of improvements on the large estates and work done in Estate Hospitals.

##### Bertam Estate.

The new hospital was completed and in use during the greater part of the year. The difficult question of water supply on this estate has been receiving particular attention.

A Jewell filter has been installed.

Average number of coolies resident on estate in 1913:—Tamils 1,334, Javanese 654 and Chinese 100.

Number of admissions to hospitals ...	...	...	813
Number of deaths in hospitals ...	...	...	23
Percentage of deaths to total coolie population ...		...	1.10

The principal diseases treated were :—

				<i>Admissions.</i>	<i>Deaths.</i>
				—	—
Anæmia	...	...	...	1	...
Ankylostomiasis	...	...	...	3	...
Bowel disorders	...	...	...	188	18
Malarial diseases	...	...	...	24	1
Phthisis	...	...	...	1	1
Ulcers	...	...	...	202	...
Venereal diseases	...	...	...	174	...

**Malakoff Estate.**

All the old lines have now been replaced by buildings of approved type, new drains and latrines have also been made and an improved water supply is being installed.

Average number of coolies resident on estate in 1913:—Tamils 597, Javanese 267 and Chinese 52.

Number of admissions to hospitals	...	...	...	270
Number of deaths in hospitals	...	...	...	9
Percentage of deaths to total coolie population	...	...	...	0.98

The principal diseases treated were :—

				<i>Admissions.</i>	<i>Deaths.</i>
				—	—
Anæmia	...	...	...	2	...
Ankylostomiasis	...	...	...	...	...
Bowel disorders	...	...	...	37	3
Malarial diseases	...	...	...	...	...
Phthisis	...	...	...	...	...
Ulcers	...	...	...	20	...
Venereal diseases	...	...	...	7	...

**Prye Estate.**

The health of this estate has been good throughout the year.

Average number of coolies resident on estate in 1913:—Tamils 513, Javanese 300 and Chinese nil.

Number of admissions to hospitals	...	...	...	194
Number of deaths in hospitals	...	...	...	9
Percentage of deaths to total coolie population	...	...	...	1.10

The principal diseases treated were :—

				<i>Admissions.</i>	<i>Deaths.</i>
				—	—
Anæmia	...	...	...	...	...
Ankylostomiasis	...	...	...	4	2
Bowel disorders	...	...	...	16	2
Malarial diseases	...	...	...	29	1
Phthisis	...	...	...	3	2
Ulcers	...	...	...	19	...
Venereal diseases	...	...	...	34	1

**Batu Kawan Estate.**

The health of this estate shows improvement this year, notably the decrease in the number of Bowel disorders. During the year the reservoirs were cleaned out and the water treated with copper sulphate to prevent the growth of algæ. This was carried out under the supervision of the Medical Officer. Additional improvements have been made for filtering the water.



Average number of coolies resident on estate in 1913 :—Tamils 431, Javanese 312 and Chinese nil.

Number of admissions to hospitals	...	...	...	226
Number of deaths in hospitals	...	...	...	7
Percentage of deaths to total coolie population	...	...	...	0.94

The principal diseases treated were :—

				<i>Admissions.</i>	<i>Deaths.</i>
				—	—
Anæmia	...	...	...	...	...
Ankylostomiasis	...	...	...	...	...
Bowel disorders	...	...	...	9	...
Malarial diseases	...	...	...	10	...
Phthisis	...	...	...	1	1
Venereal diseases	...	...	...	20	...
Ulcers	...	...	...	15	...

#### Val d'or Estate.

Three new coolie lines have been erected this year. Each is surrounded by suitable impermeable drains.

Average number of coolies resident on estate in 1913 :—Tamils 308, Javanese 150 and Chinese 67.

Number of admissions to hospitals	...	...	...	360
Number of deaths in hospitals	...	...	...	10
Percentage of deaths to total coolie population	...	...	...	1.90

The principal diseases treated were :—

				<i>Admissions.</i>	<i>Deaths.</i>
				—	—
Anæmia	...	...	...	...	...
Ankylostomiasis	...	...	...	...	...
Bowel disorders	...	...	...	58	6
Malarial diseases	...	...	...	20	...
Phthisis	...	...	...	...	...
Ulcers	...	...	...	81	...
Venereal diseases	..	...	...	31	...

#### Bakap Estate.

Some of the old dilapidated coolie lines have been replaced by others of approved type.

The water supply on this estate has been improved; it is kept strictly under supervision and is brought periodically to the Government Analyst for analysis.

Average number of coolies resident on estate in 1913 :—Tamils 134, Javanese 270 and Chinese 30.

Number of admissions to hospital	...	...	...	116
Number of deaths in hospital	...	...	...	8
Percentage of deaths to total coolie population	...	...	...	1.8

The principal diseases treated were :—

				<i>Admissions.</i>	<i>Deaths.</i>
				—	—
Anæmia	...	...	...	2	...
Ankylostomiasis	...	...	...	14	5
Bowel disorders	...	...	...	24	3
Malarial diseases	...	...	...	1	...
Venereal diseases	...	...	...	17	...
Ulcers	...	...	...	...	...

**Byram Estate.**

The number of Bowel diseases on this estate is considerably less than in 1912. Improvements in housing of coolies and drainage have been carried out.

Average number of coolies resident on estate in 1913:—Tamils 284, Javanese 728 and Chinese 20.

Number of admissions to hospital	...	...	...	393
Number of deaths in hospital	...	...	...	10
Percentage of deaths to total coolie population	...	...	...	0·96

The principal diseases treated were:—

				<i>Admissions.</i>	<i>Deaths.</i>
				—	—
Anæmia	...	...	...	4	2
Ankylostomiasis	...	...	...	2	...
Bowel disorders	...	...	...	64	5
Malarial diseases	...	...	...	29	...
Phthisis	...	...	...	1	...
Ulcers	...	...	...	48	...
Venereal diseases	...	...	...	168	...

**Bukit Tambun Estate.**

The health of this estate appears to be excellent.

Average number of coolies resident on estate in 1913:—Tamils 240, Javanese nil, and Chinese nil.

Number of admissions to hospital	...	...	...	44
Number of deaths in hospital	...	...	...	1
Percentage of deaths to total coolie population	...	...	...	0·41

The principal diseases treated were:—

				<i>Admissions.</i>	<i>Deaths.</i>
				—	—
Anæmia	...	...	...	...	...
Ankylostomiasis	...	...	...	...	...
Bowel disorders	...	...	...	5	...
Malarial diseases	...	...	...	5	...
Phthisis	...	...	...	...	...
Ulcers	...	...	...	3	...
Venereal diseases	...	...	...	12	...

**Caledonia Estate.**

The large new hospital erected at this estate for the Penang Rubber Estate Company is now completed and will be occupied early next year.

The hospital has four large wards each measuring 96 × 24 feet, an operating theatre, post-mortem room, large office and dispensary.

There are quarters for 3 dressers and 8 attendants.

The latrine and bath-room accommodation is excellent, with covered ways leading to each door to wards.

The water supply is from Bukit Panchor Reservoir and is laid on by pipes.

Average number of coolies resident on estate in 1913:—Tamils 2,913, Javanese 430 and Chinese 277.

Number of admissions to hospital	...	...	...	1,074
Number of deaths in hospital	...	...	...	48
Percentage of deaths to total coolie population	...	...	...	1·32

The principal diseases treated were:—

				<i>Admissions.</i>	<i>Deaths.</i>
				—	—
Anæmia	...	...	...	10	...
Ankylostomiasis	...	...	...	6	...
Bowel disorders	...	...	...	109	21
Malarial diseases	...	...	...	96	...
Phthisis	...	...	...	6	3
Ulcers	...	...	...	222	...
Venereal diseases	...	...	...	55	1

The above figures include Caledonia, Victoria, Jawi, Krian, Trans-Krian and Changkat Estates.

The following estates have also carried out many necessary improvements under the Estate Labourers Ordinance No. VII of 1911:—

Bukit Toh Alang	Permatang Pauh
Golden Grove	Juru
Sungai Duri	Jawi
Changkat	Krian
Trans-Krian	Sungai Kechil.
Victoria	

#### APPENDIX D.

#### MALACCA.

REPORT BY DR. W. A. TAYLOR, *Acting Chief Medical Officer.*

The population is made up as follows:—

Europeans	...	...	...	...	320
Eurasians	...	...	...	...	1,622
Chinese	...	...	...	...	37,371
Malays	...	...	...	...	83,083
Indians	...	...	...	...	7,907
Others	...	...	...	...	452
Total					130,755

*Births.*—Four thousand five hundred and six births were registered in 1913, this is 379 less than the number registered in 1912.

The following table shows nationality and sex distribution:—

Europeans	...	...	...	...	6
Eurasians	...	...	...	...	67
Chinese	...	...	...	...	825
Malays	...	...	...	...	3,400
Indians	...	...	...	...	104
Others	...	...	...	...	104
Total					4,506



Of these 2,319 were males and 2,187 females.

*Deaths.*—In the year 5,333 deaths were registered.

Europeans	...	...	...	...	2
Eurasians	...	...	...	...	41
Chinese	...	...	...	...	1,525
Malays	...	...	...	...	3,207
Indians	...	...	...	...	439
Others	...	...	...	...	119
Total					5,333

Of these males numbered 3,412, females 1,921. Comparing the death-rate for 1913 with those of the four preceding years we see a decrease.

<i>Estimated population.</i>	<i>Death-rate per mille.</i>				<i>Year.</i>
130,755	...	...	40.79	...	1913
127,797	...	...	49.09	...	1912
124,081	...	...	57.72	...	1911
98,916	...	...	52.45	...	1910
98,526	...	...	41.46	...	1909

Of these 5,333 deaths shown, 717 occurred in hospitals, 9 were certified by Registered Medical Practitioners, 714 were registered after death, 3,893 were not certified.

The general health of the Settlement was comparatively good. There were only 9 cases of small-pox during the year.

Vaccinations were carried on energetically throughout the year. I append table showing nationalities of those vaccinated.

					<i>Town.</i>	<i>Country.</i>
					—	—
Europeans	...	...	...	...	Nil	Nil
Eurasians	...	...	...	...	72	1
Chinese	...	...	...	...	3,102	1,345
Malays	...	...	...	...	1,832	1,578
Indians	...	...	...	...	148	1,184
Others	...	...	...	...	50	39
Total					5,204	4,147
					9,351	

*Municipality.*—The estimated population for the Municipality for 1913 is 22,234, within Municipal limits there were 644 births and 831 deaths in 1912.

Malaria was responsible for 206 deaths, Convulsions 133 and Phthisis 66, 244 of these deaths occurred in infants under one year. There were 46 deaths from Tetanus amongst these infants.

*Staff.*—I relieved Dr. A. H. KEUN in October when he proceeded to Europe on leave. Assistant Surgeon A. H. WHEATLEY was in charge of the Durian Daun Hospital throughout the year. Mr. WHEATLEY was assisted at the hospital by Assistant Surgeon A. C. BASU. Assistant Surgeon E. H. DE VRIES carried on the combined duties of Deputy Registrar of Deaths and quarantine work throughout the year. He had the misfortune to be bitten by a dog which was subsequently proved to be suffering from rabies, and underwent treatment at the Pasteur Institute, Batavia. Dresser F. NONIS remained in charge of the Alor Gajah Dispensary.

## DURIAN DAUN HOSPITAL.

*Staff.*—The Dresser staff remained unchanged, with the exception of Dresser NAIGALINGAM who was transferred to Singapore on 6th March, and MOHAMAD BIN OTHMAN who was transferred to the Gaol. New pupil dressers were taken on in January, J. NONIS and T. PEREIRA. The latter died on the 2nd October from Phthisis. His place was filled by pupil dresser ABDUL GHANI, who had been working from February without salary.

*Buildings.*—The various buildings were limewashed and tarred. A new and satisfactory European Ward was built in the Quarantine Camp. Tiles are being substituted for attaps in the Second Class European and Police Wards.

The total number of admissions for the year is less than that of 1912 though the number of Europeans patients showed an increase.

<i>Total.</i>			
<i>Patients admitted.</i>		<i>Europeans.</i>	
<i>1913.</i>	<i>1912.</i>	<i>1913.</i>	<i>1912.</i>
4,462	4,973	56	26

## GENERAL HOSPITAL.

*European Wards:—*

Remained on 31st December, 1912	...	...	...	3
Admitted	...	...	...	134
Discharged	...	...	...	125
Transferred	...	...	...	Nil.
Died	...	...	...	8
Remaining 31st December, 1913	...	...	...	3
Average daily sick was	...	...	...	8.02

There were no deaths amongst Europeans.

*Native Wards:—*

Remained 31st December, 1912	...	...	...	22
Admitted	...	...	...	677
Discharged	...	...	...	557
Transferred	...	...	...	13
Absconded	...	...	...	28
Died	...	...	...	58
Remaining 31st December, 1913	...	...	...	43
Average daily sick was	...	...	...	23.76

Percentage of deaths to total treated 7.89 as compared with 8.44 in 1912.

*The chief Diseases treated were:—*

Beri-beri	...	...	...	34 cases with 4 deaths.
Dysentery	...	...	...	31 " " 10 "
Gonorrhœa	...	...	...	14 " " ... "
Malaria	...	...	...	222 " " 12 "
Pneumonia	...	...	...	20 " " 7 "
Syphilis	...	...	...	9 " " ... "
Neuritis	...	...	...	16 " " ... "
Bronchitis	...	...	...	13 " " ... "
Phthisis	...	...	...	14 " " 3 "
Diarrhœa	...	...	...	23 " " 7 "
Chronic Nephritis	...	...	...	13 " " 3 "
Abscess	...	...	...	13 " " ... "
Injuries	...	...	...	141 " " 4 "
Ankylostomiasis	...	...	...	6 " " 4 "

*Police.*—The number of policemen treated was 158, 2 Europeans and 156 natives.

*Medico-legal work.*—One hundred and eighty cases attended to.

*Quarantine Camp.*—Was not occupied during the year there being no infectious diseases admitted.

## PAUPER HOSPITAL.

Remained on 31st December, 1912	...	...	265
Admitted ...	...	...	3,651
Discharged	...	...	3,202
Transferred	...	...	1
Absconded ...	...	...	42
Died ...	...	...	412
Remaining 31st December, 1913	...	...	259
Average daily sick was	...	...	252'20

Percentage of deaths to total treated 10·52 as compared with 14·02 of 1912.

*The chief Diseases treated were:—*

Beri-beri ...	...	456 cases with	27 deaths.
Dysentery ...	...	116 „ „	44 „
Gonorrhœa	...	71 „ „	...
Leprosy ...	...	13 „ „	1 „
Malaria ...	...	1,415 „ „	95 „
Pneumonia	...	91 „ „	34 „
Rheumatism	...	54 „ „	...
Syphilis ...	...	111 „ „	5 „
Anæmia ...	...	37 „ „	8 „
Neuritis ...	...	18 „ „	...
Eye diseases	...	47 „ „	...
Asthma ...	...	10 „ „	...
Bronchitis ...	...	34 „ „	...
Phthisis ...	...	98 „ „	52 „
Diarrhœa ...	...	120 „ „	57 „
Chronic Nephritis	...	58 „ „	18 „
Bubo ...	...	19 „ „	...
Chancroid ...	...	25 „ „	...
Cellulitis ...	...	16 „ „	4 „
Abscess ...	...	39 „ „	2 „
Ulcers ...	...	463 „ „	...
Injuries ...	...	43 „ „	...
Ankylostomiasis	...	146 „ „	20 „
Scabies ...	...	51 „ „	...
Necrosis of bone	...	96 „ „	...

*The number of operations performed.*—Major and minor were 260.

The following operations were performed at Durian Daun Hospital by Dr. E. N. GRAHAM, F.R.C.S., Honorary Surgeon, with no deaths:—

<i>Nature.</i>		<i>Result.</i>	<i>Anæsthetic.</i>
Amputations ...	...	3 healed	Chloroform.
Plastic operation Face	...	2 „	„
Removal of Benign tumours	...	4 „	„
Radical Cure for hydrocele	...	4 „	„
Radical Cure for hernia	...	4 „	„
Castration (for hernia testes)	...	1 „	„
Trephining ...	...	1 „	„
Operation for Mastoid disease	...	2 „	„



<i>Nature.</i>			<i>Result.</i>	<i>Anæsthetic.</i>
Removal of necrosed bone (tibia)	...	2	healed	Chloroform.
Operation for appendix abscess ...	...	2	"	"
Splenectomy (Weight 44 and 46 ozs.)	...	2	"	"
Laparotomy Exploratory ...	...	2	"	"
Evisceration eye ball ...	...	1	"	"
Wiring fractured lower jaw ...	...	1	"	"
Excision of mal-united clavicle ...	...	1	"	"
Colostomy (for dysentery) ...	...	1	"	"
Low Tracheotomy ...	...	1	"	"

#### DEATH-RATE.

##### General and Pauper Hospitals.

1. Death-rate inclusive of Quarantine Station	...	10.05
2. Death-rate exclusive of Quarantine Station	...	10.05
3. Death-rate excluding those three months and under in residence in the Colony	...	9.9

#### JASIN HOSPITAL.

General repairs to wards, quarters and out-houses were undertaken during the year. Excepting on one or two occasions the wards were free from overcrowding. The months with the greatest amount of admissions were May (100), June (76), and August (87), these were mostly malaria fever of the subtertian type. The month with the highest daily average of patients was May with an average of 79.19, the lowest being January with 52.13. The female ward was occupied principally during the latter part of the year with cases of malaria, dysentery and ankylostomiasis. The total number of patients treated during the year was 797 showing an increase of 120 as compared with that of the previous year (677) the admissions having increased by 151. Patients from neighbouring estates gave a total admission of 313 compared with 278 in 1912. The death-rate compares very favourably with that of the previous year, there being 88 deaths out of a total treated of 797, whereas in 1912, 100 died out of 677 total treated. The percentage of deaths to total treated is 11.04 and excluding those who died within 48 hours of admission 7.20. The chief diseases treated were beri-beri 73, dysentery 51, malaria 290, ankylostomiasis 36 and ulcers 69. There were 9 admissions from small-pox with 1 death, imported cases with the exception of one, a contact who developed the disease while in the Quarantine Camp.

Minor operations performed numbered 84.

Assistant Surgeon E. W. DE CRUZ was in charge of Jasin Hospital throughout the year with the exception of two weeks when Assistant Surgeon A. C. BASU had charge owing to Mr. DE CRUZ contracting Malaria. The Subordinate Staff suffered considerably from Malaria.

#### Beri-beri Return, 1913.

Remained 31st December, 1912	...	...	...	11
Admitted in 1913	...	...	...	62
Discharged	...	...	...	58
Died	...	...	...	5 (3 within 48 hours).
Remaining	...	...	...	10

Monthly admissions January 5, February 3, March 4, April 5, May 4, 3 deaths June 6, 1 death July 7, August 9, September 8, October 6, November 2, and December 3, total 62 admissions and 5 deaths.

*Race incidence :—*

Banjarese	...	...	...	...	...	2
Tamil	...	...	...	...	...	1
Chinese	...	...	...	...	...	59
Total						62

#### ALOR GAJAH DISPENSARY.

There was only one in-patient treated during the year. Out-patients numbered 325. Their nationalities were as follows:—Malays 194, Chinese 68, Indians 47, Eurasians 15, European 1. Total receipts for the year \$20.40.

#### GAOL HOSPITAL.

There were 51 cases treated in the Gaol Hospital. There was one death (Dysentery). The diseases treated were Malaria, Beri-beri (2 cases), Venereal diseases, Disease of the eye, Pneumonia, Ulcers, Wounds, and two pregnant women were delivered during their imprisonment. Malaria supplied the most admissions.

As usual most of the disease occurred among the vagrants.

#### MEDICAL MISSION.

The excellent work done by the mission in 1912 has been repeated and a large section of the native population has received treatment which could only have been given by Lady Doctors. The condition of Dr. STALEY'S health necessitated her returning to Europe during the year and Dr. E. WARREN carried on the work.

Dr. WARREN has kindly submitted the following statistics for the year:—

			1912.	1913.
In-patients	...	...	51	62
Out-patients total attendance	...	...	5,302	4,532
„ Malays	...	...	4,218	3,350
Operations „	...	...	210	187
„ Total No.	...	...	328	298

The principal diseases treated were:—

Ophthalmic diseases	...	...	284	259
Gynæcological „	...	...	297	244
Venereal „	...	...	209	188
Malaria and Complications	...	...	807	745
Beri-beri	...	...	145	156
Surgical Dressings	...	...	867	826

#### ESTATE HOSPITALS.

Bukit Asahan Estate possesses a central hospital and two subsidiary hospitals on D and I divisions.

These hospitals are well conducted. During the year 3,452 cases were treated in these hospitals with 128 deaths. The total labour force for 1913 was 3,000 giving a mortality of 42.6 per mille per annum. There was a considerable amount of Malaria

and Dysentery amongst the Tamils in the first half-year but the latter months showed a distinct improvement.

Beri-beri	...	...	...	142 cases with 15 deaths.
Malaria	...	...	...	1,680 " " 30 "
Malaria cachexia	...	...	...	79 " " ... "
Pneumonia	...	...	...	94 " " 16 "
Dysentery	...	...	...	" " 38 "
Ankylostomiasis	...	...	...	46 " " ... "

Dr. E. N. GRAHAM is the Medical Officer, Mr. MUTSERJEE is Assistant Surgeon in charge of the Central Hospital and a senior dresser is in charge of each of the divisional hospitals.

#### Merlimau Rubber Estate.

This estate has now two hospitals, each consisting of two wards containing 16 beds. One is on the Home division and the other on G division.

Total number of admissions for both estate hospitals:—

430 admissions.                      5 deaths.

The following list shows the more prevalent diseases:—

Malaria	...	...	...	217 cases with 2 deaths.
Dysentery	...	...	...	41 " " 1 "
Pneumonia	...	...	...	7 " " ... "
Beri-beri	...	...	...	3 " " ... "
Ankylostomiasis	...	...	...	11 " " ... "

Total labour force was 1,435. There were 22 deaths altogether. A large number of coolies were treated in the Government Hospitals. Dr. WEIR visits the estate. There are two senior dressers, one in charge of each hospital.

#### Tebong Estate, Tampin.

This estate possesses an estate hospital under the care of a senior dresser. Dr. RATTRAY is the visiting Medical Officer.

There were 644 admissions and 26 deaths.

				<i>Admitted. Deaths.</i>	
				—	—
Malaria	...	...	...	355	8
Dysentery	...	...	...	68	5
Diarrhœa	...	...	...	32	3
Ankylostomiasis	...	...	...	26	Nil.
Other diseases	...	...	...	163	10

There were 881 out-patients treated. The labour force is between 900 to 1,000. Pipes carrying filtered water are laid on to the lines. Malaria was much in evidence during the first half of the year; but owing to strong prophylactic measures being adopted by the Estate Medical Officer and Manager the second half-year showed a big improvement in the death-rate.

Deaths from 1st January, 1913 to 30th June, 1913	...	24
" " 1st July, 1913 to 31st December, 1913	...	2

All Tamils now receive hot congee flavoured with ginger every morning before going out to work, and every afternoon receive a mixture containing Bisulphate of Quinine.

#### Diamond Jubilee Estate.

This estate which at the end of 1911 suffered severely from Malaria and Dysentery, has by attention to sanitation become now quite healthy. Dr. RATTRAY is the visiting Medical Officer. There is a good hospital on the estate with a Sub-Assistant Surgeon in charge.



## APPENDIX E.

## HOSPITALS FOR WOMEN.

## SINGAPORE.

## Kandang Kerbau Hospital.

REPORT BY MR. F. RODRIGUES, *Assistant Surgeon*.*Work done:—*

Remained on 31st December, 1912	...	...	76
Admitted 1913	...	...	409
			<hr/>
Total			485
			<hr/>
Discharged	...	...	343
Transferred	...	...	7
Absconded	...	...	8
Died	...	...	64
Remaining 31st December, 1913	...	...	63

*The nationalities of those admitted were:—*

Europeans and Eurasians	...	...	35
Japanese	...	...	70
Chinese	...	...	180
Malays	...	...	23
Indians	...	...	101

The average daily sick was 73.35 and the percentage of deaths to total treated 11.13.

*The principal diseases treated were.*—Venereal (108), Malaria (55), Tuberculosis (30), Injuries (17), Arthritis (14), Dysentery (13), Respiratory (9), Beri-beri (7).

Forty-three injections of Neo Salvarsan were given to thirty-one cases of Syphilis, all intravenously. They included cases of Rupia, Papular Syphilides, Arthritis and one case of Primary infection.

In all except two cases, decided improvement was manifest. Three had three injections each, eight had two, and the others one each.

The best results were seen in bad cases of rupia and those which had resisted mercurial treatment. All the injection cases were put on a course of mercury as well.

Relapses occurred in three cases which had been injected the previous year: these sought readmission. One case which did not improve died 7 months after injection of exhaustion and cachexia. She was a bad case of Tertiary Syphilis.

*Operations.*—Three major operations were performed:—

Ovariectomy	...	...	1
Complete Hysterectomy for uterine myomata	...	...	1
Removal of Cancer of the breast	...	...	1

All were successful. The Ovariectomy was performed by Dr. McVAIL and the other two by Dr. WHITTLE.

The minor operations included removal of adenoids, uterine curettings, openings of abscesses, Paracenteses of abdomen, scraping of ulcers, removal of sequestrum, etc. On the suggestion of Dr. WHITTLE a few cases of Venereal Ulcers, unhealing Buboës, and chancroids were treated with Calomel fumigation applied locally. It has been found quite successful in the majority of cases.

*Out-patients.*—Two thousand seven hundred and ninety-two patients were seen at the Dispensary among Government Servants and their families.

*Staff.*—Mr. NORRIS retired on pension in June and I took over charge from him. There have been no changes in the Nursing Staff.

Dresser NARSIMALOO worked throughout the year. Dresser KIAT resigned and left in June. He was replaced by Dresser KIM KOO from Tan Tock Seng's Hospital until August when he was relieved by Dresser NONIS on the latter giving up the town vaccination which was taken over by the Municipality. He still however does the country vaccination once a week.

*Buildings.*—These have been kept in a state of repair and the annual lime-washing was done in December.

### FEMALE LEPER WARD, JELUTONG.

REPORT BY Dr. W. S. SHEPPARD, *Acting Senior Medical Officer.*

Fifteen cases remained at the end of 1912 and 5 cases were admitted during 1913 making a total of 20 cases treated in all.

There was 1 death during the year. No cases were discharged.

### MALACCA.

#### The Women's Hospital.

Remained on 31st December, 1912	...	...	...	2
Admitted	...	...	...	61
Discharged	...	...	...	46
Transferred	...	...	...	2
Died	...	...	...	11
Remaining on 31st December, 1913	...	...	...	4

#### *Principal diseases treated were:—*

Malarial Fever	...	...	...	23 cases with 4 deaths.
Gonorrhœa	...	...	...	3 „ „ „ „
Phthisis	...	...	...	5 „ „ 2 „
Eclampsia	...	...	...	2 „ „ 2 „
Puerperal Sapræmia	...	...	...	1 „ „ 1 „
Diarrhœa	...	...	...	2 „ „ 1 „
Multiple Injuries	...	...	...	4 „ „ „ „
Ulcers	...	...	...	3 „ „ „ „
Ankylostomiasis	...	...	...	2 „ „ 1 „
Daily average	...	...	...	2.22

#### Pauper Hospital.

Remained on 31st December, 1912	...	...	...	9
Admitted	...	...	...	159
Discharged	...	...	...	131
Absconded	...	...	...	2
Died	...	...	...	11
Remaining 31st December, 1913	...	...	...	24
Daily average	...	...	...	12.46

#### *Principal diseases treated:—*

Beri-beri	...	...	...	2 with no deaths.
Malarial Fever	...	...	...	28 „ 2 „
Dysentery	...	...	...	4 „ „ „
Gonorrhœa	...	...	...	14 „ „ „
Syphilis	...	...	...	6 „ „ „
Anæmia	...	...	...	4 „ 1 „
Diarrhœa	...	...	...	8 „ 3 „
Phthisis	...	...	...	3 „ 1 „
Ovarian Cyst	...	...	...	3 „ 2 „
Phagedæna	...	...	...	1 „ 1 „
Ankylostomiasis	...	...	...	4 „ 1 „

#### *Nationality of General and Pauper Wards:—*

Chinese	...	...	...	69
Tamils	...	...	...	106
Malays	...	...	...	18
Eurasians	...	...	...	20
Japanese	...	...	...	7

## APPENDIX F.

## OUT-DOOR DISPENSARIES.

## SINGAPORE.

## (North Canal Road).

REPORT BY MR. F. CLARKE, *Assistant Surgeon in charge.*

1. The Dispensary was opened for 298 days during the year, and the number of cases treated was 11,505 as against 10,493 in the previous year, an increase of 1,012.

The number of visits they made was 43,336, giving a daily average attendance of 145'42.

2. The total receipt for the year amounted to \$3,467.05 as against \$3,234.55 in 1912.

3. The principal diseases treated as compared with those of the preceding year were as follows:—

	1912.	1913.
	—	—
Malaria ... ..	1,809	1,654
Venereal Diseases ... ..	1,438	1,494
Ulcers ... ..	1,786	2,020
Bronchitis ... ..	609	558
Injuries ... ..	380	383

4. The nationalities of the patients were:—

Europeans ... ..	...	7
Eurasians ... ..	...	392
Chinese ... ..	...	7,291
Malays ... ..	...	1,053
Natives of India ... ..	...	2,025
Others ... ..	...	737

5. *Malaria*.—The total number treated was 1,654. During the early part of the year the blood films from all cases of fever were examined by Dr. FINLAYSON and out of 877 cases, 328 were returned as positive and of this number 158 were of the Subtertian type, 111 Benign Tertian, and 59 Quartan.

The nationalities were:—

Europeans ... ..	...	3
Eurasians ... ..	...	5
Chinese ... ..	...	78
Malays ... ..	...	20
Natives of India ... ..	...	177
Japanese ... ..	...	39
Arabs ... ..	...	4
Jews ... ..	...	2

Two hundred and sixty-eight of the positive cases gave a history of having been infected previous to their arrival in the Settlement and they were from the following places:—Johore including Cucob and Pulo Tekong 89, Dutch neighbouring Islands 36, Malacca 15, Federated Malay States 93, India 35.

6. *Venereal Diseases*.—Show an increase of 56. The majority of these were of Secondary Syphilis who had not been properly treated in the primary stage of the disease. Twenty-one cases of inherited Syphilis were treated during the year.

7. *Ulcers*.—Show an increase of 234 over the previous year. A large number of these were the result of badly treated minor injuries.

8. Two hundred and eighty-six children below one year of age were treated during the year. Ninety-two of them suffered from gastric and intestinal complaints, due chiefly to faulty feeding. Condensed milk is chiefly used, and a majority of the mothers are unable to state the proportion of milk and water to be used. The feeding bottles chiefly used are those with long rubber tubing.



9. Two students in their fifth year from the Medical School were detailed for duty here.

10. In addition to the work at the Out-Door Dispensary, the Assistant Surgeon is required to assist the Police Surgeon in treating the police men at the Central Police Station.

11. I relieved Mr. J. V. PESTANA, who was transferred to the Tan Tock Seng's Hospital on May 15th.

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**(Jalan Klapa).**

1. The Dispensary was opened on 22nd September, 1913.
2. The number of patients who attended the dispensary was 588.
3. The dispensary was opened for 82 days; the average daily attendance being 27.86.
4. The total receipt from the time it was opened up to the end of the year amounted to \$197.70.

5. The principal diseases treated were :—

Malaria	...	...	...	...	...	41
Chronic Malaria	...	...	...	...	...	43
Pyrexia	...	...	...	...	...	26
Rheumatism	...	...	...	...	...	25
Venereal Diseases	...	...	...	...	...	103
Bronchitis	...	...	...	...	...	35
Ulcers	...	...	...	...	...	76
Injuries	...	...	...	...	...	25

6. The nationalities of those treated were as follows :—

Eurasians	...	...	...	...	...	20
Chinese	...	...	...	...	...	203
*Malays	...	...	...	...	...	243
Natives of India	...	...	...	...	...	112
Others	...	...	...	...	...	10

Total ... 588

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\* The number of Malays formed 41.32 per cent of total treated.

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**PENANG.**

**Chowrasta Dispensary.**

Appended is a table showing the work done during the past year.

The Dispensary was open for 312 days during the year; the daily average number of visits being 61.32 as against 51.44 in 1912.

This institution continues to be well appreciated by the poorer class of people.

The principal diseases treated were :—

Malaria	...	...	...	...	...	254 Cases.
Pyrexia	...	...	...	...	...	901 „
Rheumatism	...	...	...	...	...	932 „
Syphilis	...	...	...	...	...	158 „
Bronchitis	...	...	...	...	...	407 „
Diarrhœa	...	...	...	...	...	110 „
Dyspepsia	...	...	...	...	...	237 „
Ulcers	...	...	...	...	...	1,327 „
Injuries	...	...	...	...	...	435 „

The nationalities of those treated are as follows :—

				1912.	1913.
				—	—
Europeans	...	...	...	41	36
Eurasians	...	...	...	312	377
Chinese	...	...	...	2,692	3,336
Malays	...	...	...	1,552	1,153
Natives of India	...	...	...	2,735	2,697
Others	...	...	...	145	102

Mr. Assistant Surgeon WESTERHOUT and Dresser A. STEPHEN continued to do duty throughout the year.

Comparative statement showing the number of patients at the Government Out-door Dispensary, Penang, from 1904 to 1914 :—

—	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
Number of patients attended	5,826	6,504	7,046	6,876	7,179	7,693	8,328	7,648	7,477	7,701
„ of visits paid	11,860	11,259	11,427	11,990	14,362	15,004	16,535	16,762	16,057	19,134
Patients treated free	2,026	2,624	3,353	3,095	3,077	3,436	3,519	2,747	2,685	2,010
Indigent patients	252	218	278	196	319	616	558	756	782	1,170
Paying patients	3,548	3,662	3,415	3,585	3,783	3,644	4,251	4,145	4,007	4,521
Average Number of visits per diem	30.53	38.16	38.44	40.50	46.93	48.04	52.99	53.72	51.44	61.32
Number of days dispensary open	300	295	298	296	306	310	312	312	312	312
Receipts for the year	\$ 795.10	840.56	768.26	866.90	972.15	921.60	1,047.45	1,003.20	973.80	1,101.30

*Return—Government Out-door Dispensary, 1913.*

Months.	Total Patients.	Total Visits.	Indigent Patients.	Paying Patients.	Police Force.	Government Servants.	Free Patients.	Receipts.
								\$ c.
January	689	1,500	90	375	26	177	21	95 50
February	602	1,354	104	323	20	135	20	74 20
March	657	1,484	72	394	22	142	27	95 40
April	660	1,760	57	408	8	161	26	104 35
May	756	1,829	78	497	9	151	21	123 70
June	721	1,761	118	435	14	139	15	108 50
July	657	1,762	91	411	7	118	30	102 15
August	547	1,343	71	348	3	108	17	82 10
September	634	1,387	99	368	4	144	19	83 65
October	652	2,033	146	341	5	137	23	82 55
November	606	1,385	139	322	5	130	10	76 35
December	502	1 536	105	299	4	104	8	72 85
Total	7,701	19,134	1,170	4,521	127	1,646	237	1,101 30

**Balik Pulau.**

During the year 736 patients sought treatment as compared with 413 in the preceding year.

*Work Done.*

			1912.	1913.
Number of patients	...	...	423	736
„ „ visits	...	...	824	1,369
„ „ indigent patients	...	...	51	51
„ „ Government servants	...	...	135	193
„ „ paying patients	...	...	227	495
„ „ males	...	...	318	510
„ „ females	...	...	95	226
Average number of visits per diem	...	...	2.25	3.72
Receipts for the year	...	...	\$54.75	\$119.30

*Nationality of those treated.*

				1913.			1912.
				Males.	Females.	Total.	
Europeans	...	...	5	2	7	9	
Eurasians	...	...	11	4	15	16	
Chinese	...	...	299	179	478	228	
Malays	...	...	124	18	142	80	
Indians	...	...	68	19	87	79	
Others	...	...	3	4	7	1	

**Dindings.**

*The Out-Door Dispensary.*—The number of cases treated during the year was 721, against 586 in the previous year; this shows 135 more than previous year. 327 cases were treated for fever. Of the number 721, 688 were from the District of Dindings and 33 from Sitiawan.

The receipts for the year amounted to \$76.85.

**Province Wellesley.**

The total number of attendances at the Out-door Dispensaries at Butterworth, Nibong Tebal, Bukit Mertajam and Sungai Bakap was 5,875, against 4,613 in 1912.



## MALACCA.

Three thousand and twenty-four patients were treated as contrasted with 3,640 the preceding year.

The total receipts for the year was \$378.45 as against \$478 in 1912.

*Nationalities:—*

				<i>Males.</i>	<i>Females.</i>
				—	—
Europeans	...	...	...	78	52
Eurasians	...	...	...	518	477
Chinese	...	...	...	480	170
Malays	...	...	...	727	106
Natives of India	...	...	...	338	70
Others	...	...	...	...	8
				2,141	883
				3,024	

*Chief Diseases treated:—*

Pyrexia	...	...	...	...	362
Malarial Fever	...	...	...	...	323
Bronchitis	...	...	...	...	348
Ulcer	...	...	...	...	193
Beri-beri	...	...	...	...	49
Dyspepsia	...	...	...	...	93
Anæmia	...	...	...	...	108
Neuritis	...	...	...	...	83
Diarrhœa	...	...	...	...	127
Dysentery	...	...	...	...	15

## Jasin.

During the year 415 cases were treated as contrasted with 360 cases in 1912, the receipts amounting to \$20.40.

The chief diseases treated were Malarial Fever 122 cases, Constipation 23, Bronchitis 7, Ulcers 22, Syphilis 25, Beri-beri 19, Dysentery 4.

*Nationalities.*—Europeans 14, Eurasians 51, Chinese 87, Malays 115, Natives of India 143, Others 5.

## Alor Gajah.

There was only one in-patient treated during the year. Out-patients numbered 325. Their nationalities were as follows:—Malays 194, Chinese 68, Indians 47, Eurasians 15, European 1. Total receipts for the year \$20.40.

## APPENDIX G.

## VACCINATION.

## SINGAPORE.

1. The total vaccinations performed in Singapore during the year under report was 4,091 as against 6,279 in 1912.

2. The Public Vaccinator performed 1,649 vaccinations, the rest being done by licensed vaccinators and Private Medical Practitioners.

3. The work within Municipal limits was handed over to the Municipality from 1st October and their figures are not included in this report.

Settlement.	Number of Vaccinations performed.		Result.			
	By Govt.	By others.	Perfect.	Modified.	Failed.	Not seen.
Singapore ... ..	1,649	2,442	3,956	3	90	42
Penang ... ..	2,597	232	2,541	171	65	52
Dindings ... ..	242	...	127	16	39	60
Province Wellesley ...	5,772	...	4,212	347	1,095	118
Malacca ... ..	9,168	183	2,659	206	616	5,870
Labuan ... ..	332	...	299	4	18	11
Total ...	19,760	2,857	13,794	747	1,923	6,153
22,617						

## PENANG.

1. The number of children and others collected by the Police for vaccination during the year 1913 in Penang was 2,597, and 95.50 per cent of these vaccinations were successful. There were also 232 successful vaccinations reported by the private practitioners and 166 performed at the Lam Hua Hospital.

2. The subjoined table shows the number vaccinated during the past five years and the number of births registered:—

YEAR.	Vaccination in town and country districts.	Percentage of successful cases.	Total births registered.
1909 ... ..	3,020	97.25	2,706
1910 ... ..	2,725	90.90	3,025
1911 ... ..	1,453	88.46	3,371
1912 ... ..	2,664	96.17	3,766
1913 ... ..	2,597	95.50	3,783

## DINDINGS.

Two hundred and forty-two people were vaccinated during the year with 39 failures as compared with 135 with 20 failures in 1912.

## PROVINCE WELLESLEY.

## Return of Vaccination for the year 1913.

Number of cases vaccinated was 5,772 (3,432 males and 2,340 females).

*Table showing Nationalities.*

Result.	European.	Eurasians.	Chinese.	Malays.	Indians.	Others.	Total.
Perfect ...	1	5	867	2,779	519	41	4,212
Modified ...	...	...	73	181	79	14	347
Failed ...	...	2	206	582	245	60	1,095
Not seen ...	...	...	58	48	12	...	118
Total ...	1	7	1,204	3,590	855	115	5,772
Percentage of failures to total vaccinated ...	...	28.57	17.11	16.21	28.65	52.17	18.97

*Percentage of Failures to Total Vaccinated.*

Northern.	Central.	Southern.	For the three Districts.
12.78	30.47	18.05	18.97

*Cost of each successful case of Vaccination.*

Northern.	Central.	Southern.	Remarks.
31 cts.	59 cts.	38 cts.	



## MALACCA.

*Annual Return of Vaccination and Re-vaccination in the Division of Malacca,  
for the year ending 31st December 1913.*

Station.	Number Vaccinated.	RESULT.			Not seen.
		Perfect.	Modified.	Failed.	
Town ... ..	5,201	1,940	78	510	2,681
Country ... ..	4,147	716	128	106	3,189
Vaccination done by Gurus ...	3	3	...	...	...
Total ...	9,351	2,659	206	616	5,870

## APPENDIX H.

## QUARANTINE.

## SINGAPORE.

REPORT BY DR. G. E. BROOKE, *Port Health Officer.*

## Staff.

Port Health Officer ... G. BROOKE, M.A., L.R.C.P., D.P.H.  
 Assistant Port Health Officer ... A. MATHIESON, M.B., Ch. B., D.P.H.  
 Resident Medical Officer, Quarantine Station ... J. W. ADAMS, M.B., B.C.  
 Assistant Surgeon ... W. A. DE CRUZ.

1. During the year 1,818 visits were paid to ships, and 116,271 crew and 390,652 passengers were examined.

2. Of these ships, 56 proved to be infected. The details and ports of origin are as follows:—

	<i>Cholera.</i>	<i>Small-pox.</i>	<i>Plague.</i>	<i>Total.</i>
Amoy ... ..	1	1	...	2
Amoy and Swatow	4	...	...	4
Bandjermassin ...	1	2	...	3
Batavia ...	5	...	...	5
Calcutta ...	2	1	...	3
Hoihow ...	1	6	...	7
Hongkong ...	2	11	...	13
Jeddah ...	...	1	...	1
Kelantan ...	...	1	...	1
Madras ...	4	5	...	9
Palembang ...	1	...	...	1
Pekan Bahru ...	1	...	...	1
Singkawang ...	1	...	...	1
Swatow ...	3	1	1	5
Total ...	26	29	1	56

3. Forty-five corpses from ships and sampans were sent to the Quarantine Station for post-mortem examination.

4. Sixteen out-going pilgrim ships were inspected previous to departure, and Bills of Health issued in each case. The pilgrims inspected numbered 11,407. In one case an embarking pilgrim was found to be infected with small-pox. He was removed to the Quarantine Station with his immediate friends and his baggage and the ship was then allowed to proceed with an endorsed Bill of Health.

5. Eleven returning pilgrim ships, with 7,406 pilgrims, were inspected on arrival, and only one was found to be infected, the s. s. *Antenor*, with small-pox.

To the *Antenor* passengers 396 Certificates of Quarantine were given. A certificate (including 1 family on each) is issued at a fee of 25 cents, and this proof of completed quarantine exempts from further observation when returning to Dutch ports of origin.

6. Small local coasting steamers (commonly known as the "mosquito fleet") were inspected in 25 cases, and sanitary faults corrected as necessary.

7. Twenty-five water boats were examined before an issue of licence by the Marine Department. Dirty boats were cleaned, and the source of water supply investigated.

8. Seventy-six non-infected coolie-ships, from infected ports, were detained at the Quarantine Anchorage to complete their quarantine period. Of these 3, which were quarantined for small-pox, developed small-pox; and one which was quarantined for plague, developed cholera. Some of these shiploads were detained on hulks provided by the agents. 183 visits (not included in "Visits to Ships" Appendix 2) were paid to these hulks at the Quarantine Anchorage.

9. The disinfecting launch *Hygeia* was used 113 times during the year. Fifteen of these occasions represented work on removing stores to, and changing Police Guard at, the Quarantine Station. For infected ships she was in use 55 times; and for disinfecting ships at agents' request, prior to departure for Australia, she was used 43 times.

10. Dead bodies on sampans and other boats in the harbour were examined to the number of 44, and permits to bury subsequently issued.

11. A second and much needed disinfecting launch—the *Crow*—was built by the Harbour Board, and handed over in July. This will be a valuable asset to cope with the heavy work of this large port. Another launch of larger type is being built for Penang.

#### Office and Shore Work.

12. Permits to the number of 31 were issued for the export of bodies for burial in China, etc. These permits carry a stamp fee of \$10 each.

13. Two prosecutions were conducted during the year. One that of s.s. *Gregory Apcar* for carrying an unqualified medical officer (21st April, 1913) when the Captain was fined \$50 and the owners \$500.

The second case was that of s.s. *Spezia* for neglecting to carry out Quarantine Rules, when a fine of \$20 and costs was imposed.

14. Extra Municipal work in Singapore Island was represented by 6 visits to outstations—five on account of small-pox, and one cholera. Disinfection was done in 5 cases, and contacts were vaccinated in each instance.

15. Thirteen visits were paid to Government buildings in the town, or quarters in the harbour. These included: 2 on account of small-pox, 3 for cholera, 1 for diphtheria, 2 for leprosy and 5 for general sanitary inspection (4 to Pulau Brani).

Necessary action was taken in each case.

16. Bills of Health issued by the office reached the total of 1,582.

17. Bonds were obtained in 144 cases, from Singapore residents, for guaranteeing the reporting, to Municipal Health Authorities, of deck friends arriving from infected ports. To such guaranteed passengers passes are issued as in the case of cabin passengers.

18. For the convenience of the Municipality 253 cholera contacts were sent from Singapore town to undergo their quarantine at St. John's. While there, two of these contacts developed the disease.

The department was not asked to look after any plague or small-pox contacts throughout the year.



### Quarantine Station.

19. The total passengers admitted during the year were 56,838.
20. The greatest number admitted on any one day was 2,461 (on 13th January). The maximum in residence on any one day was 4,544 (on 10th April); and, on 1st September (for the only time) there were no contacts at all.
21. Including patients remaining on 1st January, there were 1,077 admissions to hospital. The maximum on any one day was 202 (on 4th October), and the minimum 3 (on 2nd August); the average daily number throughout the year being 30.8.
22. The deaths totalled 351, giving a death-rate of 32.5 amongst total treated, which may be considered a good result considering the grave nature of most cases in a Quarantine Station hospital.
23. In the case of ships with no disease during the voyage, but coming from an infected port, and whose quarantine period is not finished, and which have *deck-passengers*, the ship itself is detained at the Quarantine Anchorage. (*Vide* paragraph 8). This leaves the station clear for actually infected ships. No existing Quarantine Station would be nearly large enough to deal with the totals of Singapore immigration by any other means.  
This principal is waived, however, for the convenience of agents, in those cases where the actual *deck passengers* on board do not exceed 250. Such small batches we are able to deal with on the Quarantine Station without unduly cramping the space.  
One hundred and ninety-five such small batches were quarantined on the station during the year; and of these one batch subsequently developed the disease for which they were suspected.
24. In the case of actually infected ships, 23 out of 48 detachments subsequently provided further cases after removal to the station.
25. The large total of 24,276 vaccinations were done during the year. Hong-kong lymph was used, with an unusually high percentage of successful results.
26. Four Government small-pox patients (*i.e.* as opposed to Municipal), and three contacts were sent to the station during the year, in addition to 21 cholera contacts.
27. There were only 54 admissions to hospital for small-pox, and only 2 for plague.
28. Cholera however was unusually active, and 505 cases were admitted. Of these 235 died giving a death-rate of 46.5 which is fairly satisfactory.
29. When the hospital is full, it invariably means that the whole Island is full and the staff working at high pressure. Strenuous efforts were however made to give special attention to the cholera hospitals, and intravenous injections of hypertonic salines were administered to 217 moribund or very grave cases.  
A special report on this cholera work, by Dr. ADAMS, the Resident Medical Officer, is appended.
30. During the Cholera epidemic, 2 camps containing 550 people were injected with Kolle's vaccine (prepared in Java). Twenty-one cases occurred amongst these and cases ceased within a week after arrival. Two adjacent camps with the same number of contacts were used as a control. Amongst them there were 32 cases, but the cases likewise ceased within a week after arrival. No special advantage was apparent, though conclusions should scarcely be drawn from such limited experiment.
31. The distilling plant worked well during the year, and 730,210 gallons were distilled and pumped into the reservoir.
32. Singapore water was also obtained to the amount of 970,840 gallons. The existence of the distilling plant with the high level reservoir and water main system, enables us without difficulty to pump Singapore water direct from a steam water-boat to the reservoir; this is a cheap and expeditious way of supplementing the distilled supply, when necessary.



33. The following new public works were wholly or partially completed during the year:—

- (a) Firemen's Quarters (new service).
- (b) Toties' Quarters.
- (c) Kitchens to wards 4, 5 and 6.
- (d) Quarters for Lay Superintendent (new service).
- (e) A large kitchen to serve wards 7-20 (new service).

A vote was also passed for an additional isolation hospital, and for a pontoon to the pier. These services will be transferred to the 1914 budget.

34. A new high pressure steam disinfecter (Delepine,-Jones) was procured, as the existing machines were found to be of insufficient capacity to cope with the disinfection of 20,000 to 60,000 people's baggage per annum. This new machine has been received but not yet fixed in its shed.

#### Staff.

35. I was on leave until the 16th November. Dr. MATHIESON, the Assistant Port Health Officer, acted for me during my absence. Dr. BUCHANAN was attached to the office as Acting Assistant Port Health Officer. Assistant Surgeon DE CRUZ was in the department throughout the year. A clerk and interpreter (Mr. KOH YEE PHIT) was appointed to the office for the first time and commenced work on the 10th April.

Dr. SMART was in residence as Residence Medical Officer at the Quarantine Station until the 24th July when he was relieved by Dr. ADAMS.

#### APPENDIX I.

##### Remarks on the Cholera Cases of 1913 at St. John's by Dr. Adams, *Resident Medical Officer.*

In the majority of cases of cholera which were infused the solution injected was of the following composition:—

Sodium Chloride	...	...	...	120 grains
Calcium Chloride	...	...	...	4 „
Potassium Chloride	...	...	...	6 „ dissolved in 1 pint of sterilized water.

Occasionally the Calcium Chloride and Potassium Chloride were omitted.

The usual amount injected was 3 pints. Occasionally one or two pints extra were given.

To the few children that came under treatment two pints were given.

The most striking point to be emphasized is that, as far as it was possible to judge, one infusion of 3 pints produced the maximum amount of benefit. If the first infusion did not cause a marked improvement it was very exceptional for a second or third to effect it. The contrast between cases improved by infusion and those not improved was remarkable. In a case which appeared likely to have a successful ending the patient, previously a bad colour, pulseless or nearly so, and almost comatose, was usually so revived after 1 or 2 pints had been given as to talk to the attendants and watch the remainder of the infusion with interest. At the same time patient's colour would have changed to normal and his pulse become much stronger. The majority of such patients drank Potassium Permanganate solution eagerly after an infusion. Before infusion they usually showed no desire to drink it, only doing so when it was suggested to them. In a case which gave little hope of recovery, the patient's general condition, pulse and colour remained practically unchanged. Occasionally an extra pint or two was given to such a case but with no good effect.

As stated previously, a second or third infusion usually produced no better result.

It will be noted that the death-rate amongst non-infused cases from ships was over 57; and amongst infused cases only 49.

On the other hand the cases admitted from the contact camps on the Island, while having about the same "infused" death-rate, had only 38 amongst the non-infused cases.

This is not to be wondered at when it is remarked that the ship cases were all bad cases or moribund on arrival, and the death-rate of these was improved in those cases where infusion was practicable. Amongst the cases originating on the station, the milder cases would not be infused and their death-rate would naturally be much less than that of the grave cases where infusion was necessary.

The following are the figures relating to cases which were infused:—

*Total cases infused 217.*

Recovered ...	...	...	...	...	110
Died ...	...	...	...	...	107
Death-rate ...	...	...	...	...	49·3 per cent.

*Cases infused once 178.*

Recovered ...	...	...	...	...	101
Died ...	...	...	...	...	77
Death-rate ...	...	...	...	...	43·2 per cent.

*Cases infused more than once 39.*

Recovered ...	...	...	...	...	9
Died ...	...	...	...	...	30
Death-rate ...	...	...	...	...	76·9 per cent.

*Statistical Cholera data for the year.*

A.—Total cases of Cholera ...	...	...	...	...	505
Recovered ...	...	...	...	...	270
Died ...	...	...	...	...	235
Total Death-rate ...	...	...	...	...	46·5 per cent.
Cases infused ...	...	...	...	...	217
Death-rate among those infused ...	...	...	...	...	49·3 „
Death-rate among those not infused ...	...	...	...	...	44·4 „

*B.—(1) Number admitted to hospital from ships=147.*

Recovered ...	...	...	...	...	67
Died ...	...	...	...	...	80
Death-rate ...	...	...	...	...	54·4 per cent.

*(2) Number admitted to hospital from camps on St. John's Island=358.*

Recovered ...	...	...	...	...	203
Died ...	...	...	...	...	155
Death-rate ...	...	...	...	...	43·2 per cent.

*C.—(1) Record of results of infused and non-infused cases admitted to hospital from ships:—*

	<i>Number.</i>	<i>Recovered.</i>	<i>Died.</i>	<i>Death-rate.</i>
	—	—	—	—
Infused ...	57	29	28	49·1 per cent.
Non-infused ...	* 90	38	52	57·7 „

*(2) Record of results of infused and non-infused cases admitted to hospital from camps on St. John's Island.*

	<i>Number.</i>	<i>Recovered.</i>	<i>Died.</i>	<i>Death-rate.</i>
	—	—	—	—
Infused ...	160	81	79	49·3 per cent.
Non-infused ...	198	122	76	38·3 „

Heavy pressure of work prevented much investigation into the subject of "carriers."

The stools of 227 recovered cases were, however, examined *once*, culturally—in each case about 3 weeks after admission.

Of these, only 4 gave positive results. These 4 cases were re-examined a second time 12 days later and proved in each instance to be free from infection.

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\* One Municipal contact who contracted Cholera in Singapore is included in this number.

## APPENDIX II.

*Condensed Résumé of some work of Port Health Office for 11 years.*

Year.	Crew & Passengers examined.	Passengers sent to St. John's.	Visits to vessels.	Bills of Health issued.	Small-pox cases treated.	Cholera cases treated.	Plague cases treated.	Calf-lymph Vaccination at St. John's.	Prophylactic Plague Vaccinations (HaffKine).	Prophylactic Cholera Vaccinations (Kolle).
1903	...	...	806	1,000	19	271	136	140	761	Nil.
1904	...	...	712	1,036	46	Nil.	9	4,623	745	Nil.
1905	...	...	1,279	1,220	62	2	5	2,586	223	Nil.
1906	...	...	1,625	1,674	37	319	2	6,963	113	Nil.
1907	...	...	1,226	1,318	37	28	Nil.	3,157	Nil.	Nil.
1908	...	...	1,506	1,344	52	36	3	9,016	Nil.	Nil.
1909	...	...	1,251	1,299	17	Nil.	Nil.	1,084	Nil.	Nil.
1910	...	...	1,920	1,200	55	182	13	12,129	Nil.	Nil.
1911	...	...	2,100	1,800	79	352	1	1,972	Nil.	Nil.
1912	...	...	1,927	2,145	139	187	4	14,947	Nil.	Nil.
1913	...	...	1,818	1,582	54	505	2	24,276	Nil.	550
Totals	...	...	16,170	15,618	597	1,882	175	80,893	1,842	550



## PENANG.

REPORT BY DR. F. R. SAYERS, *Port Health Officer*.

During the year 818 vessels were boarded and 65,042 crew units and 207,481 passengers, coolies, and pilgrims were inspected.

(a) Under the "Merchant Shipping Ordinance" 6 vessels having on board 2,430 pilgrims from Penang were inspected and cleared for Jeddah.

(b) Nine ships carrying 6,902 pilgrims returning from Jeddah were boarded and on inspection were all found to be "clean," an unusual result and a fortunate one as Penang is still without its expected disinfecting launch.

Indian immigrant ships to the number of 64 were inspected and 36,634 coolies quarantined from them at the New Quarantine Station, Pulau Jerejak.

Of these ships only four were found to be "infected" on arrival at Penang.

Of the 818 vessels inspected, six were infected, a very small proportion. The cause of infection was :—

Small-pox	...	...	...	5 vessels with 6 cases.
Cholera	...	...	...	I „ „ I „
Plague	...	...	...	0 „ „ 0 „
			<u>6</u>	<u>7</u>

These vessels came from :—

Negapatam	...	...	...	...	4
Calcutta	...	...	...	...	I
Hongkong	...	...	...	...	I
					<u>6</u>

Permits to bury from steamers and tongkangs were issued after investigation in six cases.

Statement *A* shows the number of vessels, crew units, and passengers inspected in each month of the year.

Statement *B* shows the number of vessels arriving each month from the various ports which were subject to quarantine restrictions.

STATEMENT *A*.

MONTHS.			Number of Vessels.	Number of Crews.	Number of Passengers.
January	...	...	46	4,726	12,913
February	...	...	58	4,739	10,754
March	...	...	88	6,361	18,107
April	...	...	95	7,401	14,552
May	...	...	88	6,623	22,170
June	...	...	70	3,610	21,918
July	...	...	80	7,710	20,328
August	...	...	64	5,512	17,107
September	...	...	42	4,781	20,360
October	...	...	38	3,429	19,826
November	...	...	42	4,598	13,091
December	...	...	97	5,552	16,305
Total	...	...	818	65,042	207,431

## STATEMENT B.

(SHOWING NUMBER OF VESSELS ARRIVING FROM EACH INFECTED PORT AND  
SUBJECT TO QUARANTINE RESTRICTIONS.)

PORTS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Aden ...	...	...	...	...	...	1	3	...	...	...	...	...	4
Calcutta ...	13	11	13	14	10	9	8	8	2	2	12	14	116
Rangoon ...	...	6	5	8	11	13	11	17	8	12	7	...	98
Bombay ...	3	5	2	5	5	3	5	3	4	5	2	...	42
Moulmein ...	...	...	...	1	1	2	2	3	1	...	...	...	10
Madras and Negapatam	5	4	4	5	9	8	8	4	4	5	4	4	64
Colombo ...	...	...	...	...	...	...	...	...	...	...	6	5	11
Jeddah ...	2	2	...	...	...	...	...	...	...	...	2	3	9
Batavia ...	3	3	2	4	4	2	3	6	3	2	3	2	37
Hongkong	8	5	11	15	11	10	12	9	12	4	2	8	107
Amoy and Swatow	7	2	5	3	4	2	4	3	4	4	3	6	47
Perlis ...	...	1	...	...	...	...	...	...	...	...	...	...	1
Tongkah ...	...	2	10	13	7	...	...	...	...	...	...	...	32
Sungai Upah	...	2	1	1	1	...	4	...	...	...	...	...	9
Trang ...	5	8	9	11	13	8	10	...	...	...	...	...	74
Setul ...	...	5	19	13	11	12	9	8	1	...	...	...	78
Junta ...	...	...	5	...	...	...	...	...	...	...	...	...	5
Punga ...	...	1	1	1	1	...	1	3	2	1	1	...	12
Ghirbee ...	...	1	1	1	...	...	...	...	1	3	...	...	7
Yen ...	...	...	...	...	...	...	...	...	...	...	...	6	6
Alor Star ...	...	...	...	...	...	...	...	...	...	...	...	49	49
Total ...	46	58	88	95	88	70	80	64	42	38	42	97	818

## PULAU JEREJAK.

## New Quarantine Station.

The New Quarantine Station proved equal to the demands made on it in 1913.

The total number detained for observation throughout the year was 53,937 landed from 187 vessels.

Of this number 36,634 were Indian immigrant coolies, 3 were pilgrims and the remainder 17,300 were ordinary deck passengers.

The following diseases were treated :—

				Cases.	Deaths.
				—	—
Small-pox	...	...	...	11	2
Cholera	...	...	...	12	11
Plague	...	...	...	1	1
Chicken-pox	...	...	...	47	0
Measles	...	...	...	10	0
Other diseases	...	...	...	1,840	31
Total				1,921	45

Percentage of deaths to cases treated is ... 2'34

*Small-pox*.—Eleven cases of small-pox were treated at the station of which two proved fatal.

These cases were quarantined from ships which came from the following ports :—

Negapatam	...	...	...	...	8
Calcutta	...	...	...	...	2
Rangoon	...	...	...	...	1

The report on the vaccinations at the station by the present Medical Officer, New Quarantine Station, is appended. It is satisfactory that there is such a marked increase in the percentage of successes towards the end of the year resulting in fewer coolies being detained for re-vaccination.

*Plague*.—On July 3rd 952 coolies were landed from s.s. *Taroba* for the usual detention for vaccination.

On the 8th of July one of them sickened and died on the following day.

Post-mortem examination revealed Septicæmic Plague.

No further cases arose and the contacts were discharged on the 19th of July.

*Cholera*.—On November 27th the s.s. *Taroba* arrived with one case of cholera on board. Of the 446 contacts landed at the station, 4 contracted the disease. A camp cook employed by the contractor who was stationed in one of the camps with these contacts also contracted cholera and died. Of the six cases five were fatal.

On December 11th nine hundred and seventy-eight coolies were quarantined from s.s. *Taroba*.

On the following day three cases of cholera were found and three more subsequently occurred. All six were fatal.

In all cases treatment by Hypertonic Saline infusions and Potassium Permanganate by mouth was tried.

The Jewell filter continued to work satisfactorily supplying water excellent from both a bacteriological and chemical point of view.

An important change was instituted on March 1st, 1913, the resident Assistant Surgeon being transferred and his place taken by an Officer of Grade V.

Dr. HALL TENNENT was the first Medical Officer thus to be appointed and he resided at the station until July 1st when Dr. LOUDON succeeded him and remained at the station to the end of the year.

Visits were paid by :—

1. The Resident Councillor.
2. The Principal Civil Medical Officer.



3. The Superintendent of Indian Immigration.

4. The Board of Visitors.

The health of the staff of the station is unsatisfactory.

Malarial Fever occurred in 43 members of whom 24 had not been attacked before, The station has been searched thoroughly for the breeding places of the mosquitoes. but no larvæ have been found.

During 1914 it is intended to follow up the numerous streams in the jungle and take such anti-malarial measures as may be deemed necessary. Quinine is given regularly to all the staff.

Statement *C* shows the daily average at the station.

„ *D* „ work done at the station.  
 „ *E* „ is a condensed résumé of 13 years' work.  
 „ *F* „ shows the rainfall at the station.  
 „ *G* „ is the vaccination report.

### STATEMENT *C*.

DAILY AVERAGES AT THE NEW QUARANTINE STATION, PULAU JEREJAK, IN 1913.

January	...	...	...	...	243
February	...	...	...	...	597
March	...	...	...	...	1,037
April	...	...	...	...	1,024
May	...	...	...	...	2,139
June	...	...	...	...	1,621
July	...	...	...	...	2,239
August	...	...	...	...	1,605
September	...	...	...	...	1,252
October	...	...	...	...	643
November	...	...	...	...	458
December	...	...	..	...	889

### STATEMENT *D*.

(SHOWS THE WORK DONE AT THE NEW QUARANTINE STATION, PULAU JEREJAK, IN EACH MONTH OF THE YEAR).

—	Jan.	Feb.	Mar.	Apl.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Vessels ...	12	15	14	19	26	28	19	17	9	11	9	8
Passengers and coolies (admitted) ...	1,465	2,633	3,807	3,507	7,792	6,009	8,276	5,711	4,724	4,525	1,982	3,506
Daily average ...	243	597	1,037	1,024	2,139	1,621	2,239	1,605	1,252	643	458	889
Small-pox admitted. ...	...	...	3	...	1	1	...	1	...	...	...	...
Small-pox fresh cases ...	...	...	1	1	2	...	...	...	...	...	...	1
Cholera admitted ...	...	...	...	...	...	...	...	...	...	...	1	...
Cholera fresh cases ...	...	...	...	...	...	...	...	...	...	...	3	8
Plague admitted ...	...	...	...	...	...	...	...	...	...	...	...	...
Plague fresh cases ...	...	...	...	...	...	...	1	...	...	...	...	...
Chicken-pox ...	9	10	7	4	7	...	3	1	4	...	1	1
Measles ...	...	...	...	2	...	1	2	..	3	2	...	...
Deaths, Small-pox ...	...	...	1	...	1	...	...	...	...	...	...	...
„ Cholera ...	...	...	...	...	...	...	...	...	...	...	2	9
„ Plague ...	...	...	...	...	...	...	1	...	...	...	...	...
Vaccinations ...	1,132	1,722	2,410	1,969	5,448	4,096	5,582	4,607	3,440	3,505	1,557	1,808
Total Deaths from enumerated above	...	...	1	...	1	...	1	...	...	...	2	9

## STATEMENT E.

*Condensed Report of Thirteen Years' Work—Harbour and Quarantine.*

—			Vessels.	Units of crew and passengers inspected.	Passengers landed on Quarantine Station.	Small-pox treated.	Cholera treated.	Plague treated.	Mean daily average Quarantine Station.	Vaccinations.
1901	...	...	1,309	200,186	2,188	3	3	1	...	...
1902	...	...	1,000	180,632	5,755	5	42	...	...	...
1903	...	...	957	180,251	1,688	9	22	1	...	...
1904	...	...	748	184,691	2,217	16	5	2	...	...
1905	...	...	869	214,136	10,406	10	1	...	171	...
1906	...	...	675	204,988	23,288	16	8	2	461	6,490
1907	...	...	633	219,839	17,650	4	24	1	116	5,652
1908	...	...	1,205	176,119	21,175	51	9	2	366	5,691
1909	...	...	503	161,971	23,058	25	2	1	359	5,614
1910	...	...	526	217,967	71,876	62	33	2	1,584	12,205
1911	...	...	1,144	277,151	134,957	109	387	1	3,740	63,988
1912	...	...	634	287,373	55,493	75	4	4	1,111	38,297
1913	...	...	818	272,473	53,937	11	12	1	...	37,276

## STATEMENT F.

RAINFALL—NEW QUARANTINE STATION, PULAU JEREJAK.

1913.	—		Amount.	No. of rainy days.
January	...	...	4.53	7
February	...	...	.62	3
March	...	...	7.46	9
April	...	...	5.55	6
May	...	...	15.07	15
June	...	...	7.33	7
July	...	...	4.95	6
August	...	...	4.91	5
September	...	...	17.28	18
October	...	...	10.64	19
November	...	...	17.60	19
December	...	...	1.81	5
			97.75	119

Greatest rainfall in one day—3.60 on 22nd November, 1913.

## STATEMENT G.

VACCINATION REPORT (JANUARY-DECEMBER) By Dr. LOUDON, *Medical Officer, New Quarantine Station.*

—			Attempts.	Successful.	Percentage of Success.
Total Number done	...	...	37,276	18,262	48.7
Those bearing less than six marks	...	...	16,030	9,613	60.8
Those bearing six marks	...	...	16,751	6,420	38.4
Those with marks of previous S. P.	...	...	3,190	1,057	30.2
Infants un-vaccinated	...	...	1,297	1,024	79.0

## APPENDIX I.

## GOVERNMENT ANALYST'S DEPARTMENT, SINGAPORE.

REPORT BY DR. FRANKLAND DENT, M. Sc., Ph. D., F. I. C., *Government Analyst, S. S.*

The following table shows the revenue and expenditure for the year 1913, for comparison the revenue for the preceding year is inserted:—

Revenue.	1912.	1913.	Expenditure.	1913.
<i>Fees of Office.</i>	\$ c.	\$ c.		\$ c.
Petroleum Inspection ...	4,645 00	4,355 00	Personal Emoluments	12,468 95
Miscellaneous ...	7,222 50	8,400 50	Stores from England	428 60
Total ...	11,867 50	12,755 50	Miscellaneous ...	517 60
			Transport, Travelling & Personal Allowances	241 09
By Sales of Pyridine ...	395 00	722 00	Total ...	13,656 24

The work of the Department shows a considerable increase over that of the previous year as will be seen from the following statement:—

Petroleum Ordinance.	Number of Inspections.	
	1912.	1913.
Kerosine (inside Mole) ...	231	206 (decrease)
Benzine (outside Mole) ...	112	159 (increase)
Tank Testing (in dangerous petroleum anchorage)	17	29 (increase)

Monopolies Department.	Number of Samples.	
Liquors (Liquors Revenue Ordinance) ...	47	110 (increase)
Pills, Powders, &c., (Chandu Revenue and Deleterious Drugs Ordinance) ...	17	95 (do)
Dross Cases (Chandu Revenue Ordinance) ...	66	108 (do)

Methylation of arrack ... 48,201 gallons—68,707 gallons  
(increase 42½%).

Owing to the fact that the laboratory staff during 8 months of the year consisted of myself and one assistant analyst only to cope with this large increase in Government work, I found it necessary to refuse practically all work from outside the Colony and a very large proportion of that from local commercial undertakings.



## Petroleum.

(a) *Kerosine*.—The following statement gives a comparison between the quantities tested on importation into Singapore during the years 1912 and 1913:—

Description of Oil.			1912.			1913.		
			Number of Consignments.	Tins.	Tons.	Number of Consignments.	Tins.	Tons.
<i>Case Oil.</i>								
American Oil.	Devoe's ...	5	107,000	...	6	108,500	...	
	Sylvan Arrow ...	9	335,136	...	6	140,000	...	
Langkat Oil.	Crown ...	65	245,981	...	53	236,272	...	
	Dragon ...	34	214,094	...	42	202,337	...	
	Cross ...	17	16,616	...	21	24,100	...	
	Rising Sun...	25	20,300	...	14	14,500	...	
	Lamp Glass..	11	7,250	...	9	9,500	...	
	Fish ...	19	13,744	...	19	15,982	...	
	Sumatra ...	1	500	...	1	1,000	...	
Borneo Oil	Coast Light..	...	...	...	2	200	...	
	...	11	1,950	...	8	1,250	...	
<i>Bulk Oil.</i>								
Pulau Samboe	...	33	...	1,310·1	8	...	317·6	
Pulau Bukom	...	1	...	39·7	17	...	674·512	
Total ...			231	962,571	1,349·8	206	753,641	992·112

In only one case was a consignment of petroleum, not previously declared to be dangerous, found to flash below the local standard.

Fifty-three cargoes were tested and certificates issued for petroleum consigned to Sarawak, Colombo, Hongkong, Sibn and Miri in order to avoid delay at these and intermediate ports.

Investigations were carried out on various classes of lighthouse oils for the Marine Department.

(b) *Dangerous Petroleum (Benzine)*.—One hundred and fifty-nine consignments were imported during the year as against 112 consignments in 1912. The receptacles were in all cases examined as to whether they fulfilled the conditions laid down in the Rules and By-Laws under the Petroleum Ordinance. In only two cases were the conditions not carried out and the consignments refused permits for importation.

This large increase in the importations of benzine is due to the great increase in the use of motor-cars and motor-lorries.

(c) *Mineral Turpene*.—One hundred and fifty drums were imported and tested for flashpoint.

(d) *Liquid Fuel*.—Seventeen consignments of 30,613·779 tons were tested on importation.

(e) *Tank Testing*.—Twenty-nine vessels as against 17 in 1912, which had carried petroleum, were tested in the Dangerous Petroleum Anchorage for inflammable vapour by means of Redwood's Standard Instrument under Rule 33 of the Petroleum Ordinance.

## Explosives.

Twelve consignments of explosives were tested on importation into Singapore in accordance with the Rules under "The Explosives Ordinance 1899." All passed the prescribed tests.

The following table gives the details of these and, for comparison purposes, those imported and tested during the two preceding years:—

Year.	Number of consignments.	Number of packages of 50 lbs. each.				
		Dynamite.	Gelignite.	Blasting Gelatine.	Total.	
1911	...	9	465	1,568	405	2,438
1912	...	13	870	3,670	740	5,280
1913	...	12	1,705	3,430	1,000	6,135

#### Counterfeit Coins, etc.

Five sets of exhibits, 2 of which came from Malacca, in connection with the making or uttering of counterfeit Britannia-metal coins were examined during the year.

The total number of coins was 214. Of these 22 were dollars, ten fifty-cent pieces, 112 twenty-cent pieces and 70 ten-cent pieces.

Four out of the five sets represented complete coining outfits.

One forged \$5 currency note was sent in for examination.

#### Minerals, etc.

Fifty-five samples of metalliferous minerals as against 141 in 1912, chiefly from the Federated Malay States, were assayed during the year.

Details are given in the subjoined table:—

Wolfram.	Scheelite.	Tin Ore.	Titaniferous Iron Ore.	Galena.	Gold.	Miscellaneous.
32	1	6	4	3	3	6

Under Miscellaneous are included samples of hematite limonite, pyrites (2), tourmaline and zinc ore.

In addition to the above, 3 samples of soil and 2 of Tin-lead alloy were analysed and reported upon.

#### Liquors.

The following samples were sent in by the Government Monopolies Department for examination:—

Samsoo.	Brandy.	Rice Spirit.	Gin.	Arrack.	Chinese liquors.	Unenumerated.
18	13	1	10	42	10	16

Two sets of exhibits in cases of preparing spirituous liquors without a licence were also forwarded by the same Department.

Four samples of samsoo were analysed for private firms.

### Methylated Spirits.

Five hundred and sixteen drums and 780 cases (equal in all to 68,707 gallons) of arrack were methylated for industrial purposes as against 370 drums and 657 cases (equal in all to 48,201 gallons) in 1912. This shows an increase of 20,506 gallons or about 42½ per cent for the year.

### Opium and Deleterious Drugs.

*Opium*.—Forty-two samples of Persian opium were sent in by private firms for assay.

*Chandu Dross*.—Exhibits in 108 cases of infringing the Rules under “The Chandu Revenue Ordinance 1909” were sent in by the Monopolies Department for examination and report.

*Chandu*.—Two samples were received for analysis.

*Pills, etc.*—Seventy-nine samples of pills, 7 of powders and 9 of liquids were received from the Monopolies Department and 1 sample of Pulv. Opii and 1 of an Anæsthetic from the Principle Civil Medical Officer for analysis and report.

*Morphine and Cocaine*.—An anæsthetic solution, in possession of an unlicensed dentist, was found to contain 35·3 grains of cocaine hydrochloride.

In one case 2 packets containing 2¼ lbs. of morphine hydrochloride, and in another 2 lbs. of morphine hydrochloride and 3,000 bottles each containing one-eighth ounce of cocaine hydrochloride were seized by the authorities and sent to the Laboratory for examination.

### Toxicology.

Nineteen specimens of stomachs, etc., 4 of which came from Malacca and 1 from Johore, were sent for investigation.

Two of them were found to contain alcohol and 3 (from Malacca) arsenic equal to 0·3, 4·8 and 92·2 grains, respectively, of white arsenic.

In the specimen from Johore both Brucine and Strychnine were identified. A bottle sent at the same time, part of the contents of which was said to have been taken by the deceased before death, proved to be half-full of the sliced beans of *Strychnos Nux Vomica* and an acetic acid extract of the same.

A turkey and a portion of a cow's stomach were found to be free from poison. The stomach contents of a cow, which died in Malacca, contained 4·7 grains of white arsenic.

Seven sets of exhibits were received in connection with cases of poisoning, 4 came from Malacca and 1 each from Singapore, Johore and Jelebu. These included a coconut shell containing a mixture of flour and white arsenic, hairs taken from the leaf sheaths of the bamboo, a mixture of powdered sulphur and white arsenic, 2 small bottles containing finely powdered glass, mixed with a thick black liquid to disguise its presence, a lump of crude white arsenic, etc., and a powder containing 60 per cent of white arsenic.

### Urine.

Thirty-four specimens were sent in for examination.

### Water.

Twenty samples were received for analysis, of these 9 came from Malacca, 3 from the Federated Malay States, 1 from Province Wellesley, and the rest from Singapore.

### Miscellaneous.

Other samples, not included in the above, which were sent in for analysis and report, included:—Twelve packets of mercury—tin amalgam and some “silvered” bronze coins, 4 each of copra oil cake and mineral turpentine sold as genuine turpentine, 3 each of flour, rice, native drugs, alleged poisons and articles for bloodstains, 2 each of milk, quinine tabloids, portland cement and sewage effluent and 1 each of rubber, gutta, coconut husk, a stained baju, fluid used for curing hides, boiled linseed oil, concrete slurry, a bundle of clothes in a vitriol-throwing case, etc.

### Staff.

Mr. A. M. BAILEY, A.I.C., left Government Service on 7th February, 1913, his place being taken by Mr. S. W. BUNKER, B.Sc., A.I.C., who assumed duty on 19th June, 1913. Mr. J. W. HADDON, B.Sc., F.I.C., went on leave on 19th August, 1913, and Mr. BUNKER has acted for him during his absence.



## GOVERNMENT ANALYST'S DEPARTMENT, PENANG.

REPORT BY MR. J. C. COWAP, B. Sc., F. I. C., *Deputy Analyst, Penang.*

The revenue of this Department for the year 1913 is smaller than that collected during the previous year but there has been no corresponding decrease in the amount of work done. Details of revenue and expenditure are shown in the following table and the revenue for the year 1912 is also given.

It will be seen that both the Petroleum Inspection Fees and the Miscellaneous Fees show a decrease when compared with these of last year. The decrease in the Miscellaneous Fees is more than accounted for by the fact that during 1913 very few samples of chandu suspected to be illicit were received from Taiping and Ipoh for examination.

Revenue.	1912.	1913.	Expenditure 1913.
	\$ c.	\$ c.	\$ c.
Petroleum inspection fees	3,090 00	2,650 00	Personal Emoluments 5,164 00
Miscellaneous ...	1,354 00	1,004 00	Stores ... 231 67
Certificate for export of petroleum fees ...	451 00	423 00	Miscellaneous ... 187 47
			Transport, Travelling & Personal Allowances ... 44 54
Total ...	4,895 00	4,077 00	Total ... 5,627 68

The number of reports on general analytical work was 322 together with 72 reports on petroleum tested.

**Petroleum.**

(a) *Kerosine*.—Sixty-five consignments of kerosine were tested as to the flash point. All samples were found to flash above the standard temperature (73°F.)

Particulars of kerosine imported and tested are given below :—

Description of oil.	Number of Consignments.	Tins.	Tons.
<i>Case oil.</i>			
American oil. { Sylvan Arrow ...	4	109,998	...
oil. { Devoes ...	3	45,000	...
Langkat oil. { Dragon ...	19	279,743	...
oil. { Lamp Glass ...	8	25,902	...
oil. { Fish ...	4	4,000	...
<i>Bulk oil.</i>			
Pulau Brandan ...	8	...	5,303·83
Pulau Soe-Soe ...	10	...	6,238·07
Balik Papan ...	7	...	3,044·91
Aroe Bay ...	2	...	292·96
Total ...	65	464,643	14,879·77

(b) *Dangerous Petroleum*.—Twenty-three consignments, representing 446,532 gallons of dangerous petroleum, were imported during the year. In each cases the containing receptacles were examined and found to comply with the Rules under the Petroleum Ordinance.

(c) *Petroleum Residue*.—Three consignments, representing 5,817.96 tons, were imported. Each was found to flash over 150°F.

### Explosives.

Six shipments of explosives were tested on importation and were found to pass the tests prescribed by the Rules of the Explosives Ordinance.

The amount of explosives so tested was:—

				<i>Cases.</i>	<i>Pounds.</i>
				—	—
Gelignite	...	...	...	2,420	121,000
Blasting Gelatine	...	...	...	350	17,500
Dynamite	...	...	...	35	1,750

### Counterfeit Coins.

Only two cases of counterfeit coining were dealt with during the year. In one case two silver dollars and in the other thirteen 20-cent pieces were examined and found to be false.

### Deleterious Drugs.

The number of deleterious drug cases investigated in this Department is again small, the total number being five only. One seizure by the Preventive Service consisted of six hundred  $\frac{1}{8}$ -oz. bottles of cocaine hydrochloride, and three other cases produced a total of 23 ozs. of morphine hydrochloride in the original 1-oz. packets.

### Other Drugs.

Among other drugs examined were anti-opium medicines, cough pills, chlorodyne poppy heads, quinine sulphate, etc. The anti-opium medicines and cough pills were usually found to contain opium or morphine. The total number of such drugs examined was 59.

### Toxicology.

Four cases of suspected poisoning of human beings were investigated. In one case the viscera were found to contain cresol and in one case, opium. The other two cases gave negative results.

The intestines of both a pig and a fowl were found to contain arsenic.

### Blood Stains.

Twenty-nine sets of exhibits, 95 articles in all, were received from the Police to be examined for blood stains. These included knives, hatchets, choppers, reaping hooks, etc.

### Water.

Eighty-one samples of water most of which came from Province Wellesley were analysed during the year and of these 15 were classed as bad or of doubtful quality. A number of samples were received from the Bukit Panchor Reservoir, Nibong Tebal. This Reservoir has shown a considerable improvement during the last twelve months.

The Jewel Filter installed at the Quarantine Station, Pulau Jerejak, has done much for the quality and appearance of the water supply.

There has again been an increase in the number of samples of spirits received from the Monopolies Department for the estimation of the spirit strength for the purpose of levying duty. One thousand four hundred and eighteen such samples were examined.

Twenty-four other samples of liquor were received from various sources for examination and included brandy, rum, toddy, illicit spirits, etc.

**Chandu.**

Twenty-three sets of exhibits were received from the Monopolies Department for proof as to whether illicit chandu were present. In the majority of cases no illicit chandu was found.

**Miscellaneous.**

Reports were issued on a number of samples not falling under any of the above heads. These included 13 samples of guano, 4 of cement, gunpowder, lime, boiler scrapings, samples of tin ore in a case of theft, exhibits in two cases of suspected arson, milks, meat juice, account books supposed to have been falsified; a cooking pot suspected to have caused metallic poisoning, various minerals, incrustation from an iron pipe, etc.

**Staff.**

I was in charge throughout the year.

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**APPENDIX 7.**


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**REPORT ON THE KING EDWARD VII SCHOOL OF MEDICINE,  
SINGAPORE, FOR 1913.**

REPORT BY DR. T. D. KENNEDY, *Acting Principal.*

**Staff.**

W. GILMORE ELLIS, M.D.	...	...	Dean.
R. D. KEITH, M.A., M.D.	...	...	Principal.
T. D. KENNEDY, M.A., M.B., B. Ch.	...	...	Assistant Principal.
J. A. CAMPBELL, M.D. (Edin).	...	...	King EDWARD VII Professor of Physiology.
A. J. THUMBOO, L.M.S.	...	...	Tutor.

1. *Numbers, etc.*—Twenty-one new Students joined the full course, of whom one was a woman, as compared with 23 of whom one was a woman, in 1912. Two joined the Straits Settlements Government and five the Federated Malay States as student Assistant Surgeons, ten were holders of scholarships and three were paying students. Eighteen of the twenty-three were holders of the Senior Cambridge Certificate, one with honours, who had also been awarded the Cecil C. Smith Scholarship, the premier distinction in the Straits Settlements, the remaining three entrants were holders of the Junior Cambridge Certificate and passed our Entrance Examination. Five failed to satisfy the examiners in the Latin compulsory entrance examination. As this is the first year that a knowledge of Latin has been compulsory these five students were awarded scholarships subject to forfeiture should they again fail in Latin in 1914.

A holder of the Assistant Surgeon diploma of the Madras Medical College was admitted to the School as a paying student to study for one year before being eligible to sit the final examination for the L.M.S.

The total number of full course students on the roll during the year was ninety-six, an average of nearly twenty in each year, as compared with eighty-two in 1912. Of these, nineteen were paying students, twenty were student Assistant Surgeons and fifty-seven were holders of scholarships.

2. *Discipline, etc.*—Two students were asked to resign as unsuitable and three were allowed to resign.

The conduct of the students has been good.

3. *Examinations, etc.*—The standard of preliminary examination for entrance to the School was raised in 1912 to that of the Senior Cambridge; this year an elementary knowledge of Latin was also made compulsory for scholarship candidates. The preliminary education of the full course students has thus been placed on a high



standard. As already mentioned, out of the twenty-one entrants, eighteen had already obtained the Senior Cambridge Certificate, some of whom had gained high places in the local schools.

The effect of raising the standard of preliminary education during 1912 and 1913 is very noticeable in the type of student who has entered during these two years. Having a better foundation especially in English, they are able to take better advantage of the course of training at the Medical School and make quicker progress along with sounder understanding. The final results of training in the Medical School largely correspond to the standard of knowledge at entrance. We therefore look forward in the future to a better type of medical practitioner being produced than hitherto.

In the final year examinations the results were fairly satisfactory. In the August examination, thirteen out of seventeen passed in Medicine, twelve out of seventeen in Surgery, and nine out of seventeen in Midwifery. In the December examination, five out of seven passed in Medicine, four out of seven in Surgery, and eight out of ten in Midwifery. Midwifery was undoubtedly the weak subject.

The percentage of rejections in the final examination for 1913 was :—

August, 1913,	Rejections	53 per cent.
December, 1913,	„	30 „

In considering these figures it ought to be remembered that they refer only to the more intelligent and industrious students as the others were asked to resign early in the course. The December examination was wholly made up of these students who had failed at the August examination, and the fact that it was their second appearance accounts for the lower rejection percentage. It will thus be seen that our standard of pass is being maintained at a fairly high level.

The following have completed their course :—

<i>Date.</i>	<i>Name.</i>	<i>Remarks.</i>
August, 1913.	A. E. Duraisamy	F. M. S. Assistant Surgeon.
	A. Visvalingam	Do.
	G. T. Edward	Do.
	Goh Tiang Keng	Private.
	Tan Hong Ann	Do.
	Low Seng Tak	Do.
	A. C. Kathigasu	Do.
	S. Nagalingam	Do.

Mr. GOH TIANG KENG who was doing well in private practice in Ipoh died suddenly on December 7th.

December, 1913.	Lim Chwee Leong	Private.
	Tan Seng Tee	Do.
	Ong Bak Hin	Do.
	Low Chew Seng	Do.
	K. Thillyampalam	Do.
	C. Chelliah	Do.
	H. P. Samuel	F. M. S. Assistant Surgeon.

Fifteen candidates have therefore received the L. M. S. Diploma during the year, a larger number than has passed out in any previous year. The licentiates of the School now number fifty-one; the first batch passed out in May, 1910.

4. *Staff, etc.*—Dr. KEITH went on leave on 4th April, when I took over the duties of Principal, at the same time continuing my own duties as lecturer in Anatomy and Surgical Anatomy. Arrangements were concluded for the filling of the chair of the King EDWARD VII Professor, and Dr. J. ARGYLL CAMPBELL, M.D., arrived on June 19th, and took up his duties as Professor of Physiology. Dr. CAMPBELL came with the highest testimonials, having been for four years Assistant to Professor Sir E. A. SCHAFER of Edinburgh University, and having there carried out a considerable amount of original research, while gaining experience in the teaching of all branches of physiology.

Dr. ELDER continued as lecturer in Biology, Dr. DENT in Chemistry and Physics, Dr. GIBBS in Medical Jurisprudence, Dr. MORE in Ophthalmology, Mr. G. W. CRAWFORD in Practical Pharmacy, assisted by Messrs. NORRIS and RODRIGUES, Hon. Dr. GILMORE ELLIS in Mental and Nervous Diseases, Dr. JOHNSON in Midwifery and Gynæcology, and Dr. MATHIESON continued to act for Dr. BROOKE as lecturer in Public Health.

Dr. MACDOUGALL acted as lecturer in Materia Medica until the return of Dr. MURRAY ROBERTSON, Dr. MACDONALD SCOTT continued as lecturer in Pathology until Dr. FINLAYSON was free to return to his duties. Messrs. BARDHAM and ANDO continued giving their assistance. On the departure of Dr. KEITH, Dr. FINLAYSON took over the teaching of Clinical Medicine and with it the two wards at Tan Tock Seng's Hospital. The Hon. Dr. J. GALLOWAY was unable to continue lecturing in the Practice of Medicine during the long session and this was done by Dr. MACDOUGALL. On the transfer of Dr. JOHN GRAY to Penang, Dr. E. D. WHITTLE took over the teaching of Surgery and Clinical Surgery. In the native wards of the General Hospital Drs. HARRISON, SIMPSON and HOLDBROOK superintended the junior students in the dressing of cases during the short term.

Mrs. AMERY, in the Out-patient Maternity Department, Victoria Street, has been indefatigable in personally superintending the conduct of labours by students and has given them a practical experience in Midwifery which had hitherto been impossible. Miss MCLEAN and Mrs. BOYES also gave valuable assistance in the Maternity Hospital.

The lecturers, as in former years, have given their time and services most generously.

5. *The Out-patient Maternity Department.*--Permission was granted by Government to make use of the Old Maternity Hospital Buildings in Victoria Street for this purpose. Mrs. AMERY was installed as Matron and teacher. All the expenses of teaching and maintenance were met out of school funds. The experience gained by the students in personally visiting labour cases in their homes and conducting the cases under the supervision of the Matron has been invaluable. The Council felt that the school funds could not longer stand the strain of the upkeep of this department and asked Government to provide for its maintenance in the 1914 Estimates. It was necessary to put this department under the Hospital Estimates and it is therefore no longer a department of the Medical School, but students will be permitted to attend and conduct such cases as do not object to male attendance.

The following is the short résumé of the work done in this department during 1913. In all 155 Maternity cases were attended. Only two maternal deaths are reported, both due to assistance being called for too late. In one the Uterus was ruptured previous to call, in the other,—a case of impacted shoulder,—the arm had been protruding five days before call. Fourteen infants were still-born. Fifty cases were abnormal including ten forceps cases; seven Breech; four Transverse; two Placenta Prævia; two Ruptured Uteri; one complete ventral hernia of infant; one Hydrocephalus; two Eclampsia; two Prolapse of Uterus; two Prolapse of Uterus and Bladder; three Prolapse of Cord; three Twins; one Locked Twins; one Impacted Shoulder; four Adherent Placenta; four Extreme Pendulous Abdomen.

It only requires a glance at the above abnormal cases to see that the lives of many mothers and children have been saved and that this institution is doing something towards the reduction of maternal and infantile mortality and by giving a higher standard of training to the students about to go into practice will do still more.

## B.

### Hospital Assistant Course.

6. Thirty-seven new students joined this course during the year as compared with 23 in 1912, 17 in 1911, and 10 in 1910. Of these 37, 21 were sent by the Federated Malay States Government; two by the Straits Settlements Government; three by the Kedah Government; four were the holders of School Scholarships; two of W. W. BAILEY Scholarships; the rest were paying students. This is the first occasion that the Kedah Government has taken advantage of the school as a training College to supply their wants.

The total number of Hospital Assistant students attending during the year was 72 as compared with 39 in 1912, 26 in 1911, and 24 in 1910. This increase in the number of Hospital Assistant students is mainly due to the increasing number of students sent down for training by the Federated Malay States Government. The Federated Malay States Government students in training in 1910 were 15; in 1911, 16; in 1912, 24; in 1913, 33.

During the year five students resigned. As the preliminary education of this class of student is usually poor, they are often unable to carry through their studies to the satisfaction of their teachers and examiners.



The following eighteen students received their certificates :—

August, 1913	R. Shanmugam	Private.
December, 1913	A. Rajah	Private.
	C. Rajah	Do.
	Leong Yuen Lock	Do.
	K. Nalliah	Do.
	I. P. Levi	Do.
	S. Somasundram	Do.
	Wong Yuen Khun	Federated Malay States.
	V. Nadarajah	Do.
	Elaju Pillai	Do.
	F. James	Do.
	Venasitamby	Do.
	S. Ponnampalam	Do.
	R. Nagalingam	Do.
	M. Fernando	Do.
	V. Nadayson	Straits Settlements.
	K. Kandiah	Do.
	Kulasagram	Do.

This brings the total number who have received their certificates up to 74. Of these 74, 44 are in the Federated Malay States Government Service, 15 in Straits Settlements Government Service, and the rest doing private work in Estates, etc.

We are still unable to supply the demand of Managers of Estates and Mines for this type of dresser.

7. In the training of Hospital Assistants in their practical work in the wards we are especially indebted to Dr. J. R. McVAIL, Resident Medical Officer, Tan Tock Seng's Hospital, for his thorough course of instruction, and to Senior Dresser TEO CHIN SENG who instructed them in the use of the Microscope.

For 1914 an Assistant Surgeon has been attached to the staff of the School who will give his whole time to this instruction at Tan Tock Seng's Hospital.

In the department of Practical Pharmacy, another very important feature in the training of Hospital Assistants, Mr. CRAWFORD, M.P.S., will in 1914 give considerably more time in order to cope with the large increase in the number of students.

8. *Discipline, etc.*—The conduct of the Hospital Assistant students was not so good as that of the full-course students. The absence of the discipline of the local schools was apparent in many who had little or no local education.

### C.

#### Extra Mural Examinations.

9. *Promotion of Assistant Surgeons and of Dressers.*—A number of Assistant Surgeons and Dressers in Government employ passed these examinations. The syllabus of the examination for promotion of dressers is under revision.

10. *Qualified Dispenser.*—One student out of three candidates obtained his Pharmaceutical License under the Provisions of the Deleterious Drugs and Poisons Ordinance after attending the required classes and passing the examination. The scope of this examination, on the recommendation of the Straits Pharmaceutical Association, has been materially widened and the standard raised.



11. *Certificate in Dentistry*.—The syllabus of this examination has been arranged and certain classes may be taken out at the Medical School. With the passing of Ordinance No. XIV of 1913, it is now compulsory for all unqualified or unlicensed dentists to take this examination for license to practice.

12. *Midwife Certificates*.—A number of European nurses and native midwives have been given certificates after training and examination at the Maternity Hospital.

## D.

### General.

13. The total number of students attending the full course and hospital assistant course during the year was 165, as compared with 125 in 1912. These numbers show that the additions to the teaching staff mentioned above under *A* and *B* have been urgently required. The total number of students who have been granted L.M.S. Diplomas or Hospital Assistant certificates since the opening of the School is now 125.

14. *Buildings, etc.,—Students' Hostel*.—The plans for this hostel for Federated Malay States Government students on the site of Beaconsfield Estate have been approved.

15. *King Edward VII Memorial Fund*.—This sum of \$124,800, which was handed over to the Council of the Medical School on the 23rd of November, 1912, to found a Professorship, has now been invested.

16. *Books, Apparatus, etc.*—A few new books and some apparatus, chiefly chemical, pharmaceutical and physiological, have been purchased. A number of old and out-of-date text books have been discarded. There have been few additions to the Pathological Museum.

17. *Recreation, etc.*—The Medical Students' Recreation Club had an active and prosperous year. In football they have played 4 matches, won 2 and drew 2; and in cricket they played 7 and won 5. The tennis tournament had a large entry and the championships, singles and doubles, were keenly contested. The cross country race, inaugurated last year by Dr. KEITH, was the feature of this year's sports. The prizes gifted by the staff and former and present students, were presented by Mrs. GILMORE ELLIS. Negotiations for a much-needed recreation ground have been proceeding for some time but much difficulty in obtaining a site is being experienced. This recreation club is run almost entirely by the students themselves and deserves every encouragement.

18. On the 18th November Ordinance No. XII of 1913 was assented to, giving effect to His Majesty's cordial approval of the proposal that the Straits and Federated Malay States Government Medical School should be called the King EDWARD VII Medical School. The Council of the School was empowered by Clause 7 to grant, after such examination as it considers proper, certificates of competency to dentists resident in the Colony, in addition to chemists. Under Ordinance No. XIV of 1913, the Deleterious Drugs Ordinance 1910 was amended to give a new definition to "dentist" making it illegal for other than *bonâ fide* dentists to practise without holding a qualification.

19. Dr. W. FLETCHER, M.D., Pathologist, Institute of Medical Research, Kuala Lumpur, has been appointed as the nominee of the Chief Secretary to the seat on the School Council vacated by Dr. G. D. FREER. It is with regret that we note the resignation from Government Service on the grounds of ill-health of Dr. FREER, the first Principal of the Medical School.

20. The L. M. S. of the Medical School has been recognized by the Bombay Medical Council for purposes of Registration.

21. *Visitors*.—During his visit to Singapore, Professor Sir E. A. SCHAFER visited the School and, on the afternoon of Tuesday, the 18th November, delivered to students and members of the medical profession a lecture illustrated by lantern slides on "Internal Secretion." Besides the frequent visits of the Principal Civil Medical Officer, Straits Settlements, we have been visited by the Principal Medical Officer, Federated Malay States.

22. The Council is much indebted to the General Practitioners, Government Medical Officers and others for their ungrudging services as lecturers.

## APPENDIX K.

## PATHOLOGICAL DEPARTMENT.

REPORT BY DR. G. A. FINLAYSON, *Government Pathologist.*

## LABORATORY.

There were 1,247 specimens examined, 304 being sent in by private practitioners and 943 forwarded from Government institutions.

## Widal Reaction.

There were 634 examinations conducted of which 77 gave a distinctly positive reaction with a dilution of 1 in 50, 78 gave a partial reaction, while 479 were negative. Four cases gave a distinct reaction with *B. Paratyphosus*.

Monthly incidence of cases giving a partial or definite reaction:—

January	... 24	April	... 15	July	... 17	October	... 10
February	... 16	May	... 18	August	... 12	November	... 4
March	... 12	June	... 17	September	... 6	December	... 4
	—		—		—		—
	52		50		35		18
	—		—		—		—

Of a total of 118 for the year 1912, 42 were reported during November and December. The outbreak was apparently carried into the earlier months of 1913.

## Malaria.

The parasite was demonstrated in 29 blood films, in 76 it was not found.

## Tuberculosis.

The causal bacillus was found in 35 specimens of sputa, in 92 a negative result was given. Eleven cases of suspected Leprosy were examined; four showed the typical bacilli.

## Diphtheria.

Thirty-six swabs were examined; in 15, representing a fewer number of cases, as one carrier was inspected frequently, the Klebs-Loeffler bacillus was observed.

## Gonorrhœa.

Thirty-one smears of urethral or vaginal discharge were examined, in nine the specific diplococcus was detected.

## Syphilis.

The Wassermann reaction was carried out on 115 cases, 33 proved positive while 82 were negative.

## Various.

Other examinations included 27 of urine for casts, etc., 88 of fæces for amœbæ, ova, etc., 17 pieces of tissue for microscopical diagnosis, 30 of pus, body fluids, etc., for bacterial contents. The precipitin test for human blood was performed in two medico-legal cases.

## Water Examinations.

*Municipal supply.*—From January until the end of May a sample was taken weekly from varied standpipes within the boundaries. The low bacterial count recorded in December, 1912, was maintained, the average of twenty examinations being 38 organisms per c. c. on plated Agar and 42 per c. c. on Gelatine. Further McConkey's medium showed a great diminution in the numbers of the *B. Coli* group.

An exhaustive examination of the supply has been carried on almost daily by the Municipal Bacteriologist since he assumed duty. Special reports on the Jasin and Bukit Panchor water supplies have been already forwarded.



## MORTUARY.

## Tan Tock Seng Hospital.

Total number of autopsies performed 1,010. Of these 92 on behalf of the Coroner.

## Return showing the Immediate Cause of Death.

Beri-beri ...	...	95	Diseases of the nervous system ...	29
Lobar Pneumonia ...	...	69	„ circulatory system ...	36
Other diseases of the respiratory system ...	...	44	„ genito-urinary system ...	35
Malaria ...	...	105	Varied septic conditions ...	41
Accidents, etc. ...	...	40	Syphilis ...	10
Poisoning ...	...	2	Plague ...	1
Tuberculosis ...	...	120	Kala-azar ...	1
Enteric fever ...	...	23	Blackwater fever ...	1
Dysentery ...	...	220	Ankylostomiasis ...	28
Cholera ...	...	5	Schistosomiasis ...	5
Suppurative peritonitis ...	...	41	Leprosy ...	1
Other diseases of the alimentary system ...	...	40	New growth ...	15
Starvation ...	...	1	Senility ...	2
			Unknown ...	2

## Return showing Incidence of Disease.

## GENERAL DISEASES.

Beri-beri ...	...	98	Black-water fever ...	1
Cholera ...	...	5	Kala-azar ...	1
Enteric fever ...	...	31	Plague ...	1
Paratyphoid fever ...	...	2	Splenic anæmia ...	2
Pigmented peyer's patches ...	...	35	Starvation ...	1
Pneumonia (a) acute ...	...	76	Senility ...	2
„ (b) chronic ...	...	29	Syphilis ...	15
Malaria—benign tertian ...	...	8	Ankylostomiasis ...	37
„ quartan ...	...	1	Schistosomiasis ...	14
„ subtertian ...	...	87	Leprosy ...	1
„ mixed infection ...	...	1	Sapraemia ...	17
„ unclassified ...	...	40	Septicæmia ...	12

## LOCAL DISEASES.

## A.—Nervous System.

Meningitis (a) septic ...	7	Cerebral softening ...	11
„ (b) tuberculous ...	4	Myelitis, acute ...	1
„ (c) cerebro-spinal ...	4	Cerebral laceration ...	6
Cerebral gumma ...	6	Intracranial hæmorrhage ...	10

## B.—Circulatory System.

Thrombosis, femoral vein ...	1	Endocarditis, ulcerative (a) aortic ...	4
„ iliac „ ...	1	„ (b) aortic & mitral ...	2
Aneurism of thoracic aorta ...	3	Endocarditis, chronic (a) aortic ...	7
„ left ventricle ...	2	„ (b) mitral ...	3
Arteriosclerosis (a) advanced ...	13	Myocarditis, chronic ...	3
„ (b) early ...	104	Hydropericardium marked ...	49
Dilated aortic arch ...	4	Hæmopericardium ...	1
Brown atrophy of heart ...	9	Pericarditis (a) acute ...	23
Fatty degeneration of heart ...	11	„ (b) chronic ...	20



*C.—Respiratory System.*

Bronchitis, (a) acute ... ..	6	Pyopneumothorax ... ..	2
„ (b) chronic ... ..	1	Hydrothorax—marked ... ..	39
Broncho-pneumonia ... ..	60	Fibrosis of lung ... ..	1
Bronchiectasis ... ..	2	Tuberculosis general ... ..	6
Pulmonary œdema ... ..	29	„ „ acute miliary ... ..	5
„ collapse ... ..	11	„ „ of lung (a) active ... ..	162
„ gangrene ... ..	11	„ „ „ (b) quiescent ... ..	11
„ abscess ... ..	2	„ „ larynx ... ..	30
„ infarct ... ..	3	„ „ trachea ... ..	3
Emphysema—marked ... ..	37	Pleuritis (a) recent with adhesions ... ..	43
Lobar Pneumonia (a) acute ... ..	76	„ (b) old „ „ ... ..	74
„ „ (b) chronic ... ..	29	„ (c) tuberculous ... ..	138
Empyema ... ..	31	Anthracosis ... ..	1
Pneumothorax ... ..	1	Hæmothorax ... ..	2

Hæmopneumothorax 1.

*D.—Digestive System.*

Gastritis, chronic ... ..	1	Splenic Infarct ... ..	10
Gastric ulcer ... ..	8	Malarial pigment ... ..	136
Gastro-enteritis, acute ... ..	3	Tuberculosis of tongue ... ..	1
Entero-colitis, acute ... ..	8	„ pharynx ... ..	5
Pyloric obstruction ... ..	2	„ small gut ... ..	82
Duodenal ulcer ... ..	2	„ large gut ... ..	23
Appendicitis ... ..	7	Pancreatitis, chronic ... ..	2
Cholangitis, (a) acute ... ..	7	Hernia, reducible ... ..	4
„ (b) chronic ... ..	1	Intussusception ... ..	1
Cholecystitis, acute ... ..	4	Peritonitic (a) suppurative ... ..	59
Biliary Calculi ... ..	17	„ (b) chronic ... ..	6
Hepatic abscess ... ..	12	„ (c) tuberculous ... ..	8
„ gumma ... ..	10	Dysentery, amœbic (a) acute ... ..	95
„ infarct ... ..	1	„ „ (b) chronic ... ..	136
„ cirrhosis ... ..	45	„ bacillary (a) acute ... ..	56
Cyanotic atrophy of liver—advanced ... ..	3	„ „ (b) chronic ... ..	12
Perihepatitis, chronic ... ..	29	„ mixed infection ... ..	17
Tuberculosis of liver ... ..	8	„ malarial ... ..	3
„ spleen ... ..	17	Sprue ... ..	1
Perisplenitis, chronic ... ..	44	Schistosome infection of gut ... ..	14
Splenic Abscess ... ..	2	Stricture of rectum ... ..	2
Splenic Gumma ... ..	6	Prolapsus ani ... ..	1

*E.—Genito-Urinary System.*

Cystitis, acute ... ..	10	Epididymitis, acute ... ..	1
Vesical fistula ... ..	1	Enlarged prostate ... ..	1
Renal calculus ... ..	7	Hernia testis ... ..	1
„ infarct ... ..	3	Extravasation of urine ... ..	1
„ gumma ... ..	1	Nephritis, parenchymatous ... ..	
Tuberculosis of kidney ... ..	8	„ (a) acute ... ..	5
„ ureter ... ..	1	„ (b) chronic ... ..	21
„ bladder ... ..	2	„ interstitial ... ..	38
Hydronephrosis ... ..	2	„ cosecutive ... ..	2
Pyelonephritis ... ..	16	Uræmia ... ..	1
Congenital Cystic Kidney ... ..	1		

*F.—Diseases of Bones and Joints.*

Caries of Spine ... ..	3	Gumma of sternum ... ..	1
Tuberculosis of hip joint ... ..	1	Otitis media ... ..	1
„ sternum ... ..	1		

*G.—New Growth.*

Carcinoma of stomach	...	7	Mediastinal Sarcoma	...	1
„ liver	...	7	Endothelioma of lung	...	1
„ caecum	...	1	Angioma of liver	...	4
Epithelioma of œsophagus	...	2	Dermoid Cyst	...	1
„ Groin	...	1	Lipoma—thigh	...	1

*H.—Affections produced by External Causes.*

Fracture of skull	...	11	Fracture of pelvis	...	2
„ spine	...	3	Strangulation by hanging	...	7
„ lower jaw	...	1	Gunshot wound	...	1
„ rib	...	4	Stabwound—abdomen	...	1

*K.—Varied conditions.*

Abscess, gluteal	...	1	Carbuncle	...	1
„ psoas	...	2	Cancrum oris	...	2
„ pericæcal	...	1	Extensive ulceration (a) of trunk	...	5
„ of axilla	...	1	„ „ (b) lower extremity	...	10
„ „ hip	...	1	Bedsore, marked	...	10
„ „ thigh	...	1	Tuberculosis of lymphatic glands	...	19
„ „ face	...	1	marked, (a) bronchial	...	8
Gangrene of trunk	...	5	„ (b) cervical	...	20
„ „ extremities	...	2	„ (c) abdominal	...	2
Cellulitis, acute (a) upper extremity	...	2	Tuberculosis of bronchial gland	...	2
„ (b) lower „	...	4	quiescent	...	2
„ (c) trunk	...	2			

**MORTUARY.****Sepoy Lines.**

Total number of autopsies performed, 279; of these 123 on behalf of the Coroner.

**Return showing Immediate Cause of Death.**

Beri-beri	...	12	Schistosomiasis	...	1
Pneumonia	...	17	Diseases of the nervous system	...	5
Other diseases of the respiratory system	...	12	„ „ circulatory system	...	21
Malaria	...	21	„ „ genito-urinary system	...	19
Accidents, etc.	...	66	Varied septic conditions	...	8
Tuberculosis	...	21	Small-pox	...	1
Enteric fever	...	14	Tetanus	...	1
Dysentery	...	11	New Growth	...	3
Cholera	...	8	Eclampsia	...	1
Suppurative peritonitis	...	21	Malignant Œdema	...	1
Other diseases of the alimentary system	...	7	Siriasis	...	1
Ankylostomiasis	...	4	Alcoholism	...	2
			Unknown	...	1

**Return showing Incidence of Disease.****GENERAL DISEASES.**

Beri-beri	...	16	Malaria	...	25
Cholera	...	8	Pernicious anæmia	...	1
Enteric fever	...	26	Splenic anæmia	...	2
Dysentery	...	21	Syphilis	...	2
Lobar pneumonia	...	21	Small-pox	...	1
Septicæmia	...	2	Eclampsia	...	1
„ puerperal	...	1	Siriasis	...	1
Sapræmia	...	3	Malignant Œdema	...	1
Ankylostomiasis	...	4	Alcoholism	...	5
Schistosomiasis	...	3	Tetanus	...	1

## LOCAL DISEASES.

*A.—Nervous System.*

Meningitis (a) septic ...	...	2	Myelitis, acute ...	...	2
„ (b) tuberculous ...	...	2	Cerebral infarct ...	...	1

*B.—Circulatory System.*

Embolism, cerebral ...	...	1	Endocarditis chronic (a) aortic ...	...	4
Aneurism of thoracic aorta ...	...	4	„ (b) mitral ...	...	3
Arterio-sclerosis, advanced ...	...	4	Pericarditis acute ...	...	3
Cardiac infarct ...	...	1	„ tuberculous ...	...	1
Myocarditis, chronic ...	...	2	Cardiac syncope (a) fatty heart ...	...	5
Endocarditis, chronic (a) aortic ...	...	4	„ (b) acute dilatation ...	...	2

*C.—Respiratory System.*

Bronchitis, chronic ...	...	1	Tuberculosis, general ...	...	2
„ capillary ...	...	1	„ of lung (a) active ...	...	37
Broncho-pneumonia ...	...	17	„ „ (b) quiescent ...	...	2
Bronchiectasis ...	...	1	„ „ larynx ...	...	4
Pulmonary gangrene ...	...	3	Pleuritis (a) recent with ...	...	22
Lobar pneumonia, (a) acute ...	...	19	„ (b) „ „ adhesions ...	...	28
„ (b) chronic ...	...	2	„ (c) tuberculous ...	...	33
Empyema ...	...	3	Hydrothorax ...	...	1
Pneumothorax ...	...	1			

*D.—Digestive System.*

Gastritis, chronic ...	...	1	Dysentery bacillary (a) acute ...	...	7
Gastric ulcer ...	...	4	„ „ (b) chronic ...	...	2
Appendicitis ...	...	1	„ mixed infection ...	...	3
Cholangitis, acute ...	...	2	„ malarial ...	...	3
Biliary calculi ...	...	3	Syphilitic ulceration of pharynx ...	...	1
Subphrenic abscess ...	...	1	Tuberculosis of small gut ...	...	12
Hepatic Abscess ...	...	1	Tuberculosis of large gut ...	...	7
„ Gumma ...	...	3	Tuberculous mesenteric gland		
„ Cirrhosis ...	...	5	quiescent ...	...	1
Perihepatitis, chronic ...	...	5	Peritonitis (a) suppurative ...	...	21
Tuberculosis of liver ...	...	2	„ (b) chronic ...	...	7
Splenic abscess ...	...	1	„ (c) tuberculous ...	...	4
Splenic infarct ...	...	4	Hernia (a) strangulated ...	...	4
Tuberculosis of spleen ...	...	3	(b) reducible ...	...	1
Perisplenitis, chronic ...	...	4	Stricture of rectum, fibrous ...	...	1
Malarial pigment ...	...	35	Stenosis of ileo-caecal valve ...	...	1
Enteric Fever ...	...	26	Intestinal obstruction ...	...	3
Dysentery (a) acute amœbic ...	...	6	Volvulus ...	...	1
„ (b) chronic „ ...	...	8	Intussusception ...	...	1
„ (c) quiescent „ ...	...	4	Intestinal infarct ...	...	1

*E.—Genito-Urinary System.*

Cystitis (a) acute ...	...	5	Nephritis parenchymatous (a) acute ...	...	7
(b) chronic ...	...	1	„ (b) chronic ...	...	7
Tuberculosis of bladder ...	...	1	„ interstitial ...	...	8
Vesical calculus ...	...	1	Uræmia ...	...	4
Renal infarct ...	...	2	Stricture of urethra ...	...	2
Tuberculosis of kidney ...	...	3	Extravasation of urine ...	...	1
Pyonephrosis ...	...	1	Orchitis, septic ...	...	1
Pyelonephritis ...	...	5	Oöphoritis, chronic ...	...	1
Pyelitis ...	...	1	Salpingitis, chronic ...	...	1

*G.—New Growth.*

Ovarian cystoma ...	...	1	Cancer of liver ...	...	1
Parovarian cystoma ...	...	1	Epithelioma of larynx ...	...	1
Cancer of stomach ...	...	1	Gumma of clavicle ...	...	1



*H.—Affections produced by external causes.*

Fracture of skull	...	...	21	Rupture of spleen	...	...	11
„ spine	...	...	8	„ liver	...	...	6
„ femur	...	...	6	„ heart	...	...	1
„ tibia and fibula	...	...	2	„ intestine	...	...	3
„ radius and ulna	...	...	2	„ kidney	...	...	3
„ ribs	...	...	9	Laceration of lung	...	...	4
„ tarsus	...	...	1	Cerebral concussion	...	...	1
Fracture of carpus	...	...	1	Middle meningeal hæmorrhage	...	...	2
„ clavicle	...	...	2	Cut throat	...	...	2
„ lower jaw	...	...	1	Burns	...	...	3
„ sternum	...	...	2	Chloroform poisoning	...	...	1
„ pelvis	...	...	4	Drowning	...	...	3
Stabwound—abdomen	...	...	5	Hæmorrhage from injury	...	...	2
„ neck	...	...	1	Gunshot wounds	...	...	3
„ heart	...	...	1	Suffocation at birth	...	...	1

**QUARANTINE CAMP.**

Number of autopsies performed 12.

**Cause of Death.**

Lobar pneumonia	...	...	1	Dysentery	...	...	2
Broncho-pneumonia	...	...	1	Malaria	...	...	1
Nephritis, acute	...	...	1	Cholera	...	...	4
Aneurism of aorta	...	...	1	Cancer of rectum	...	...	1

**Incidence of Disease.**

Malaria	...	...	1	Infarct of lung	...	...	1
Malarial pigment in spleen	...	...	1	Nephritis, parenchymatous acute	...	...	1
Dysentery bacillary (a) acute	...	...	1	Uræmia	...	...	2
(b) chronic	...	...	1	Aneurism of abdominal aorta	...	...	1
Lobar pneumonia	...	...	1	Cancer of rectum	...	...	1
Broncho-pneumonia	...	...	2	Fæcal fistula	...	...	1
Pleuritis chronic with adhesions	...	...	4	Pigmented Peyer's patches	...	...	1

Since June patients have been admitted into the Municipal Infectious Diseases Hospital.

**GENERAL DISEASES.**

1. *Beri-beri*.—Of 114 cases showing the usual pathological features 107 or almost 94 per cent died of the disease. As is usually noted a considerable percentage died within a short time after admission.

2. *Enteric Fever*.—Only 57 cases showed typical intestinal lesions as compared with 87 in 1912; of these 23 or 40 per cent died of an acute suppurative peritonitis from perforation of the gut. A fair number entered hospital in a hopeless condition, all the signs of an advanced peritonitis being in evidence. The question of “typhoid carriers” has been brought up in prior reports but it is in most instances impossible to learn where the individual lived and with what people he had been in intimate contact as probably in the majority they are cases of direct personal infection.

3. *Malaria*.—In 163 autopsies, as compared with 318 in 1912, and 624 in 1911, malarial parasites were demonstrated in the spleen or peripheral blood; other 172 cases showed pigmentation of the spleen, making a total of 335 with signs of malaria or almost 26 per cent of all autopsies. One case of Blackwater fever in a Japanese is to be recorded.

4. *Plague*.—Only one case of Bubonic Plague was observed.

5. *Cholera*.—An autopsy was made on 17 cases of cholera. In the latter half of the year the cases were sent to Moulmein Road Hospital.

6. *Dysentery*.—Three hundred and forty-eight as compared with 535 in the previous year. The bacillary variety occurred in the proportion of 1 to 3·2 of the amœbic type of lesion. The varied strains of *B. Dysenteriae* have been isolated and further work is being carried out as to their reactions towards specific sera.

In view of the recent work by Walker, etc., on Amœbic Dysentery the problem of the carrier has to be considered when it is found that 20 per cent of all cases exhibit present or past lesions of the pathogenic amœba.

7. *Pneumonia*.—*Lobar incidence—Acute.*

Right upper	...	8	Left upper	...	8
„ „ and middle	...	8	„ lower	...	22
„ „ and lower	...	5	All lobes	...	5
„ middle	...	5			
„ „ and lower	...	17			
„ lower	...	20			
All lobes	...	10			

*Lobar incidence—Chronic.*

Right upper	...	1	Left upper	...	2
„ „ and middle	...	4	„ lower	...	3
„ „ and lower	...	1			
„ middle	...	1			
„ „ and lower	...	4			
„ lower	...	6			
All lobes	...	1			

In quite a number of cases the pulmonary consolidation was complicated by a purulent effusion into the pleura or by a thick layer of fibrinous exudate. The pericardial sac was frequently infected.

## LOCAL DISEASES.

## A.

One remarkable feature is the paucity of cases which exhibit gross lesions of the central nervous system; seldom are the meninges affected in individuals with advanced tuberculous disease, while sporadic cases of cerebro spinal meningitis are infrequently observed.

## B.

The question of syphilitic myocarditis has been discussed in former years. In two instances large gummata were noted, while in two an aneurismal dilatation of the ventricular wall had been produced.

## C.

Tuberculous diseases of the lung were seen in 227 cases, so that the percentage incidence remains fairly constant.

## D.

Causes producing inflammation of the peritoneal sac:—

*Acute—General.*

Enteric fever	...	23	Gastric Ulcer	...	2
Dysentery	...	15	Strangulated Hernia	...	3
Appendicitis	...	5	Intussusception	...	1
Perityphlitis	...	1	Rupture of small gut	...	3
Hepatic abscess	...	1	Stabwound of abdomen	...	1
Splenic abscess	...	1	Pyelophlebitis	...	1
Acute Cystitis	...	1	Pneumococcal, etc.	...	12
Post operative	...	1			

*Acute—Localised.*

Dysentery	...	10	Stabwound	...	1
Pyelonephritis	...	1	Pneumococcic	...	1
Gastric ulcer	...	1			

It may be considered worthy of record that in 17 cases the ova of *Schistosomum japonicum* were found in great numbers in the hepatic substance and in the gut.

**E.**

There seems to be no doubt but that an associated nephritis is more frequently recorded with an infection by the malarial parasite. Further it may be noted that cases of Blackwater Fever amongst Japanese working on rubber estates along the Johore River are not at all infrequent, though only one case was observed at Tan Tock Seng Hospital.

**G.**

Primary cancer of the liver 8, and cancer of the stomach 8, still appear to be the more common types of malignant growth, whether implanted in the one instance on a prior cirrhosis and in the other upon an ulcer it is impossible to accurately determine.

**K.**

Ascaris lumbricoides ...	...	...	...	147
Trichocephalus trichiurus	...	...	...	36
Ankylostomum duodenale	...	...	...	184
Clonorchis sinensis ...	...	...	...	21
Schistosomum Japonicum	...	...	...	17

As noted above in 32 instances Ankylostomiasis was returned as the immediate cause of death, while in six cases there appeared to be a generalized infection of the gut by the Schistosomum Japonicum.

**STAFF.**

On Dr. W. M. SCOTT'S departure for Europe in May I resumed my duties in the Department. Mr. K. ANDO continued as an assistant until July when part of the work was undertaken by Mr. J. THUMBOO who was in turn relieved by Mr. S. N. BARDHAN on his return from leave in September.

There was no change in the subordinate staff throughout the year.

Dr. P. S. HUNTER, Municipal Bacteriologist, has been working in the Laboratory since his arrival in May.

**APPENDIX L.**

**ANNUAL REPORT ON THE MEDICAL DEPARTMENT, LABUAN,  
FOR THE YEAR 1913.**

BY DR. T. C. A. CLEVERTON.

*Population and health:*—Table showing the estimated population, and the birth and death-rates, for the years 1911 to 1913.

Years.	Estimated Population.	Births.	Deaths.	Birth-rate.	Death- rate.
1911 ...	6,546	189	183	28.87	27.97
1912 ...	6,634	211	125	31.80	18.84
1913 ...	6,706	216	144	32.20	21.47

The birth-rate was highest during the third quarter. and the death-rate was highest during the fourth quarter.



Of the total number of deaths malaria accounted for 33, fever not specified for 9, old age and debility for 27, "Other Causes" and "Unknown" for 46. The mortality under 1 year of age was 49, as against 42 in 1912: the causes of this high infantile mortality are improper feeding and insufficiency of light and air: the Malays keep their houses very dark and very badly ventilated and they rarely take their infants away from their houses: the results are weakly children who are unable to withstand even a mild attack of malaria or bronchitis. The following table shows the infantile mortality under 1 year of age:—

Years.			Deaths.	Percentage to total Death-rate.	Percentage to total Birth-rate.
1911	...	...	56	30.60	29.62
1912	...	...	42	33.60	19.90
1913	...	...	49	34.02	22.68

There was only one still birth during the year. The causes of death amongst infants were given as follows:—Malaria and Fever not specified 21, Convulsions 18, Inanition 5 and Other Causes 5.

*Malaria.*—This fever has been somewhat prominent during the latter part of the year. Deaths from this infection numbered 33, giving a percentage of 29.16 of the total death-rate, as against 27.2 in 1912. Ninety-four cases were admitted to hospital during the year as against 58 cases in 1912: twenty-eight of the admissions for this disease were imported from British North Borneo and Brunei.

The type of infection was chiefly subtertian.

Two hundred and fifty-two cases were treated as out-patients, as against 198 in 1912.

This increase in the cases presenting themselves for malaria can partly be accounted for by the fact that many of them came straight from British North Borneo and Brunei with the infection in them, but it is a fact that the indigenous population has also suffered more severely from this disease, possibly due to the Asiatics from British North Borneo and Brunei reinfesting Labuan Asiatics.

The Sanitary Inspector used his influence to endeavour to keep the town land free from empty tins, broken bottles, etc., but it is difficult and often impossible to convict people of the offence of depositing such receptacles.

One hundred and thirty-two ounces of quinine were spent throughout the year as prophylactic and curative, as against ninety-seven ounces in 1912.

The Executive Engineer expended \$2,000 upon anti-malarial measures which included the extension of town drains, the reclaiming of more land at the extremity of the town, the improvement of the drainage of grounds in the suburbs, including Government House grounds, and the felling of scrub and jungle.

*Beri-beri.*—This disease shows a slight increase over the previous year, but this increase is certainly not due to the disease having been contracted in Labuan. Out of 23 cases treated in hospital (as against 16 in 1912) 15 of these admissions were imported from Brunei, and three from British North Borneo, with the disease in them. Ten cases of this disease were treated as out-patients. Only four deaths were attributed to this disease, one of which occurred in hospital.

Most of these cases improve rapidly in hospital, their stay being strikingly less prolonged than it was before the introduction of parboiled rice. This rice was used throughout the year in hospital.

*Venereal Disease.*—These diseases are also on the increase and this again can be traced to Asiatics from British North Borneo and Brunei. Twenty-five cases were admitted to hospital as against 23 in 1912 and 16 were treated as out patients as against 9 in 1912. The increase is more real than these figures indicate however. There were two deaths attributed to these diseases.

*Pulmonary Tuberculosis.*—Twelve cases were treated in hospital as against 13 in 1912, with 3 deaths in hospital as against 4 in 1912. The percentage of deaths ascribed to this disease was 13·1 of the total death-rate as against 13·6 in 1912.

*Dysentery and Diarrhœa.*—Nine cases were admitted to hospital with one death: this case was imported from British North Borneo and died within 36 hours of admission to hospital. Labuan is remarkably free from these diseases.

*General Remarks.*—It will be seen from the foregoing that many of our cases come from British North Borneo and Brunei. Thus on looking through the hospital admission book it is found that out of 242 admissions 103 came almost immediately from British North Borneo and Brunei. Many of these cases have to be admitted as paupers, others are sent by the Brunei Government, and a few pay the contribution of 25 cents a day themselves.

Ships and launches coming from British North Borneo and Brunei are not medically examined, and a number of undesirables are landed in Labuan from these places. Ships and launches bringing sick paupers are prosecuted when possible, and there have been 4 or 5 different convictions with fines imposed, but Labuan still gets undesirables landed. Labuan in itself is undoubtedly very healthy now: if it were not for the constant influx of Asiatics from British North Borneo the mortality returns would be more satisfactory. There is no work for other Asiatics in Labuan, and those who come to Labuan from British North Borneo stay only for a week or two and spread disease in Labuan, often spending the latter part of their stay in the Civil Hospital.

*Port Health Work.*—Only one ship was medically examined during the year. This ship was granted immediate pratique. Seventeen Bills of Health were issued during the year.

*Police Force.*—The general health of this force has not been as good as it was last year. Sixty-three cases amongst the force were admitted to hospital as against 41 in 1912, and 285 cases were treated as out-patients as against 170 in 1912. This increase is partly accounted for by the fact that a number of the old members have left and have been replaced by Asiatics from other places, who have been more susceptible to Malaria than the older members. Some of these recruits have come from British North Borneo and as it is the practice to sign an agreement for only one year in the case of natives, some are passed as physically fit who have already slightly enlarged spleens, and these would probably not be passed if the recruits were engaged upon longer contract. This is a factor which tends towards the spread of Malaria, and it is from this infection that the greater number of these cases were suffering throughout the year. Of these 63 cases admitted to hospital amongst the Police 44 were Malaria, and of the 285 cases treated as out-patients 128 were Malaria.

*Prisoners.*—There has been a large increase in the number of prisoners and therefore there have been more cases of sickness but on the whole the general health has been fair, notwithstanding some temporary overcrowding of the Gaol, owing to the Brunei Government sending a large number of their prisoners to undergo sentences in the Labuan Gaol. Forty-one prisoners were admitted to hospital, 19 being admitted for Malaria. Fifty-five were treated as out-patients, of whom 18 were treated for Malaria.

*Out-patients.*—There is a slight increase here also. Seven hundred and forty cases as against 699 in 1912. They consisted of 28 Europeans, 19 Eurasians, 309 Malays, 281 Indians, 88 Chinese, and 15 other nationalities. Malaria, Bronchitis and Venereal Diseases were amongst the chief treated.

*Sanitation.*—The sewage and scavenging system remains the same as in former years and appears satisfactory. The sanitary board has been replaced by the Rural Board having authority under "The Municipal Ordinance of 1913."

*Vaccination.*—Villages were visited from which the natives were not in the habit of sending their children to hospital for vaccination. In this way 332 vaccinations were done, all of them on Labuan inhabitants as against 459 in 1912 which included only 249 upon Labuan inhabitants, the remainder consisting of the deck passengers and crew of s.s. *Mausang*. Thus there was an excess of 83 vaccinations proper to Labuan over those in 1912. Of the 332 vaccinated 299 were successful, 4 were doubtful, 18 were unsuccessful, and 11 were not seen.

*Ages.*—Children 3 to 4 months 85 vaccinations: 4 months to one year 124 vaccinations: above one year 123 vaccinations. The lymph supplied was generally good except towards the end of the year.



*Meteorological.*—The North-East Monsoon blew from January to the end of March when the South-West Monsoon blew to the end of November. During December the morning records showed south-west winds and the afternoon and evening records showed north-east winds: the north-east was the prevailing wind during this month however. Labuan was again subjected to a slight drought in the first few months of the year, the town supply from the reservoir totally failing in April when the water was again brought down from Coal Point by train. The total rain fall during the year was 141·30 inches as against 117·54 in 1912. The wettest month was September when 22·99 inches fell. The greatest rainfall in 24 hours fell on the 20th September when 6·50 inches fell. The maximum temperature was 95·0° Fht. on 23rd April. The minimum temperature was 70·5° Fht. on 1st of September. The maximum mean temperature during the year was 87·1° Fht. The minimum mean temperature during the year was 75·8° Fht. The mean temperature during the year was 82·0° Fht.

*Hospital.*—The total number of admissions was 242, making a total treated of 248, including the 6 remaining over from 1912. In 1912 there were only 210 admissions to hospital. Only 5 remained over at the end of 1913.

The admissions in 1913 included 3 Europeans, 7 in 1912, and 13 women against 7 in 1912.

Only 11 operations were performed as against 13 in 1912. There were 10 deaths in hospital giving a percentage mortality of 4·03 as against 4·97 in 1912. One death occurred within 3 hours of admission and 2 deaths within 36 hours. The chief diseases treated were Malaria 95 cases with 3 deaths, Beri-beri 23 cases with 1 death, Pulmonary Tuberculosis 12 cases with 3 deaths, Dysentery and Diarrhœa 9 cases with 1 death, Venereal diseases 25 cases with no deaths. One case of Chicken-pox was admitted and isolated.

*Hospital Buildings and Grounds.*—Minor repairs were done and the buildings were lime-washed within and without.

*Staff.*—There were no changes except that Mr. PESTANA relieved the Medical Officer for two weeks while the latter was in Singapore attending the assizes in July.

Hospital Assistant A. PONNAMPALAM and Dresser R. VYTHILINGAM carried out their duties well.

*General.*—His Excellency the Governor Sir ARTHUR YOUNG paid a visit to the hospital on 6th August, 1913. The Resident, Mr. HARVEY CHEVALLIER, paid 11 visits of inspection to the hospital.

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		TEMPERATURE.						RAINFALL.		WINDS.		REMARKS.
		Solar Maximum.	Minimum on Grass.	Shade Maximum.	Shade Minimum.	Range.	Mean.	Amount in Inches.	Degree of Humidity.	General Direction.	Average Force.	
		°F	°F	°F	°F	°F	°F	Inches.	%			
January ...	...	144·7	70·3	86·0	74·4	11·6	83·1	19·66	84·0	N.E.	6·0	
February ...	...	149·4	70·8	88·5	73·6	14·9	81·5	9·25	79·0	N.E.	6·9	
March ...	...	133·4	71·2	88·2	77·1	11·1	81·8	20·80	86·0	N.E.	4·1	
April ...	...	142·7	71·2	88·9	73·1	15·8	82·1	10·99	82·0	S.E.	4·3	
May ...	...	142·9	73·2	89·1	75·5	13·6	83·5	7·85	80·0	S.E.	5·9	
June ...	...	140·6	72·5	87·4	75·4	12·0	82·2	12·81	82·0	S.E.	6·3	
July ...	...	142·0	71·3	88·5	75·0	13·5	83·1	4·58	78·0	S.E.	7·3	
August ...	...	142·4	71·6	88·6	74·9	13·7	83·0	2·54	76·0	S.E.	6·3	
September	...	143·6	71·6	88·3	74·4	13·9	82·2	8·84	81·0	S.E.	5·3	
October ...	...	146·8	73·0	89·6	74·2	15·4	83·0	10·50	78·0	I.W.	5·0	
November	...	151·7	70·9	88·2	73·7	14·5	81·3	16·57	82·0	S.W.	3·9	
December	...	142·4	70·5	87·8	73·1	14·7	80·7	11·73	84·0	N.E.	3·3	
Mean	...									...	...	

## SINGAPORE.

*Return of Diseases and Deaths in 1913 at the following Institutions:—  
General Hospital, Prison, St. John's Island, Tan Tock Seng's Hospital, Quarantine  
Camp, Leper, Beri-beri and Kandang Kerbau Hospitals and Lunatic Asylum.*

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
INFECTIVE DISEASES.						
Black Water Fever	...	2	...	2	...	
Beri-beri	161	1,136	134	1,297	180	
Cerebrospinal fever	1	...	...	1	...	
Chicken-pox	2	2	...	4	...	
Cholera	...	510	239	510	1	
Cow-pox	...	...	...	...	...	
Dengue	...	45	...	45	...	
Diphtheria	...	10	3	10	...	
Dysentery	29	674	310	703	37	
Endocarditis, infective	...	...	...	...	...	
Enteric Fever	14	125	53	139	4	
Erysipelas	...	9	3	9	...	
Gonorrhœa	9	200	...	209	11	
Febricula	2	...	...	2	...	
Leprosy	46	84	11	130	38	
Malaria	12	103	28	115	11	
Tertian	43	2,182	122	2,225	57	
Quartan	2	211	35	213	...	
Mixed	...	2	...	2	...	
Chronic	12	401	28	413	19	
Not differentiated	33	1,056	9	1,089	42	
Measles	1	74	...	75	...	
Mumps	...	11	...	11	1	
Scarlet Fever	...	...	...	...	...	
Phagedœna	1	12	6	13	3	
Plague	...	2	...	2	...	
Pneumonia	2	223	125	225	7	
Pyæmia	...	2	...	2	...	
Pyrexia	...	65	...	65	1	
Rheumatism	2	51	...	53	1	
Septicæmia	...	48	42	48	4	
Small-pox	10	74	9	84	...	
Syphilis, Primary	12	430	...	442	17	
Secondary	65	1,100	25	1,165	91	
Tertiary	20	30	...	50	...	
Tetanus	...	5	3	5	...	
Tuberculosis	14	74	31	88	9	
Yaws	...	2	...	2	...	
Other Diseases	...	120	10	120	...	
INTOXICATIONS.						
Alcohol	...	36	1	36	2	
Mercury	...	...	...	...	...	
Morphinism	1	...	...	1	...	
GENERAL DISEASES NOT INCLUDED IN THE TWO PRECEDING GROUPS.						
Anæmia	2	73	3	75	4	
" pernicious	1	1	1	2	...	
Diabetes	1	2	...	3	1	
Exophthalmic Goitre	...	...	...	...	...	
Chlorosis	...	...	...	...	...	
Dropsy	...	...	...	...	...	
Lymphadenoma	...	...	...	...	...	
Osteo Arthritis	...	...	...	...	...	
Old age	9	15	6	24	8	
Other Diseases	2	7	2	9	...	
Carried forward ...	509	9,209	1,239	9,718	549	

## Return of Diseases and Deaths in 1913 at the Singapore Hospitals.—Continued.

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	509	9,209	1,239	9,718	549	
CERTAIN MORBID CON- DITIONS INCIDENT TO VARIOUS PARTS.						
Malformations ...	...	1	...	1	...	
Foreign Bodies, Effects of ...	...	...	...	...	...	
New Growth ...	...	...	...	...	...	
Non-malignant ...	2	7	...	9	...	
Malignant ...	...	51	19	51	3	
Cyst ...	4	6	...	10	...	
DISEASES OF THE NERVOUS SYSTEM.						
DISEASES OF THE NERVES.						
Neuritis ...	8	114	2	122	8	
DISEASES OF THE SPINAL CORD AND MEMBRANES.						
Meningitis ...	...	15	13	15	...	
Myelitis ...	2	9	1	11	6	
Sclerosis ...	...	1	...	1	...	
Locomotor Ataxia ...	3	...	...	3	...	
DISEASES OF THE BRAIN AND MEM- BRANES.						
Meningitis ...	...	5	3	5	1	
Hæmorrhage ...	...	7	4	7	...	
Abscess ...	...	...	...	...	...	
Hydrocephalus ...	...	...	...	...	...	
Other Diseases ...	...	2	...	2	1	
NERVOUS DISORDERS.						
Cerebral Softening ...	...	1	1	1	...	
Paraplegia ...	2	19	3	21	8	
Hemiplegia ...	18	96	19	114	22	
Neurasthenia ...	...	7	...	7	...	
Paralysis ...	1	5	...	6	2	
Epilepsy ...	19	19	1	38	19	
Headache ...	...	2	...	2	...	
Neuralgia ...	...	15	...	15	...	
Sclerosis ...	...	...	...	...	...	
Apoplexy ...	...	1	...	1	...	
Other Diseases ...	2	20	5	22	3	
MENTAL DISEASES.						
Idiocy ...	...	...	...	...	...	
Mania, Acute ...	154	169	29	323	203	
Recurrent ...	5	1	...	6	5	
Chronic ...	3	1	...	4	4	
A potu ...	4	25	...	29	1	
Senile ...	2	10	3	12	7	
Melancholia, Acute ...	26	19	...	45	27	
Chronic ...	8	1	1	9	8	
Delusional Insanity ...	4	145	2	149	8	
General Paralysis of Insane...	1	4	2	5	3	
Dementia, Secondary ...	184	2	25	186	150	
Organic ...	5	15	...	20	20	
Primary ...	...	13	2	13	6	
Other Diseases ...	18	10	3	28	19	
<i>Carried forward ...</i>	984	10,027	1,377	11,011	1,083	



## Return of Diseases and Deaths in 1913 at the Singapore Hospitals.—Continued.

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	984	10,027	1,377	11,011	1,083	
DISEASES OF THE EYE.						
Conjunctivitis, Catarrhal ...	6	72	...	78	10	
Purulent ...	2	26	...	28	1	
Granular ...	...	12	...	12	...	
Keratitis ...	5	31	...	36	3	
Cornea, Ulcer of ...	2	72	...	74	2	
" Opacity ...	3	19	...	22	12	
Iritis ...	1	49	...	50	1	
Glaucoma ...	1	4	...	5	...	
Optic Neuritis ...	...	2	...	2	1	
Cataract ...	4	14	...	18	3	
Panophthalmitis ...	...	12	...	12	...	
Entropion ...	1	1	...	2	...	
Other Eye Diseases ...	55	104	...	159	48	
DISEASES OF THE EAR.						
Hæmatoma of Auricle ...	...	...	...	...	...	
External Ear, Inflammation. ...	...	...	...	...	...	
Middle Ear ...	...	16	...	16	...	
Otorrhœa ...	...	...	...	...	...	
Other Diseases ...	...	9	...	9	...	
DISEASES OF THE NOSE.						
Epistaxis ...	...	1	...	1	...	
Naso-pharyngeal Catarrh ...	...	...	...	...	...	
Coryza ...	...	...	...	...	...	
Other Diseases ...	...	...	...	...	...	
DISEASES OF THE CIRCULATORY SYSTEM.						
Pericarditis ...	...	9	9	9	...	
Endocarditis ...	...	10	4	10	...	
Valvular Disease ...	1	103	39	104	3	
Atheroma ...	...	...	...	...	...	
Fatty Degeneration of Heart ...	...	1	1	1	...	
Endarteritis ...	...	...	...	...	...	
Disordered Action of Heart ...	...	...	...	...	...	
Aneurysm ...	...	10	5	10	1	
Phlebitis ...	...	1	...	1	...	
Thrombosis ...	...	2	...	2	1	
Arterial sclerosis ...	1	2	1	3	...	
Other Diseases ...	...	3	1	3	...	
DISEASES OF THE RESPIRATORY SYSTEM.						
Asthma ...	2	43	1	45	5	
Laryngitis ...	...	2	...	2	...	
Bronchitis ...	6	316	5	322	7	
Hæmoptysis ...	...	4	...	4	...	
Broncho-pneumonia ...	1	22	15	23	1	
Phthisis ...	17	395	208	412	39	
Pleurisy ...	2	30	9	32	...	
Empyema ...	2	36	25	38	2	
Pyopneumothorax ...	...	2	1	2	1	
Gangrene of Lung ...	...	11	9	11	...	
Other Diseases ...	1	5	...	6	...	
<i>Carried forward ...</i>	1,097	11,478	1,710	12,575	1,224	

## Return of Diseases and Deaths in 1913 at the Singapore Hospitals.—Continued.

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	1,097	11,478	1,710	12,575	1,224	
DISEASES OF THE DIGESTIVE SYSTEM.						
Stomatitis ...	2	8	...	10	...	
Pylephlebitis ...	...	...	...	...	...	
Cholecystitis ...	...	5	1	5	...	
Caries of Tooth ...	...	2	...	2	...	
Cholangitis ...	...	6	5	6	...	
Sorethroat ...	...	5	...	5	...	
Tonsillitis ...	...	14	...	14	1	
Pharyngitis ...	...	18	...	18	3	
Gastritis ...	1	72	...	73	1	
Ulceration, Stomach ...	2	4	4	6	...	
Dyspepsia ...	2	111	...	113	5	
Other Diseases of Stomach..	...	5	1	5	1	
Enteritis ...	1	52	7	53	...	
Appendicitis ...	...	10	...	10	2	
Colitis ...	2	58	...	60	2	
Ulcer Duodenum ...	...	1	...	1	...	
Gastric Dilatation ...	...	...	...	...	...	
Hernia, Reducible ...	...	20	1	20	3	
„ Strangulated ...	2	15	5	17	...	
Obstruction, Intestines ...	...	3	3	3	...	
Diarrhœa ...	10	288	13	298	9	
Constipation ...	...	56	...	56	...	
Sprue ...	...	1	...	1	...	
Colic ...	1	14	...	15	...	
Ischio Rectal Abscess ...	...	2	...	2	...	
Fissure of Anus ...	2	1	...	3	...	
Fistula in Ano ...	6	42	...	48	2	
Piles ...	...	42	...	42	1	
Prolapse of Rectum ...	1	4	...	5	...	
Other Rectal Diseases ...	2	5	2	7	...	
Liver, Inflammation ...	...	3	...	3	...	
Abscess ...	1	16	7	17	1	
Cirrhosis ...	11	72	22	83	7	
Hepatitis ...	...	6	4	6	1	
Congestion ...	...	5	...	5	...	
Jaundice ...	...	10	1	10	...	
Gall Stones ...	...	...	...	...	...	
Peritoneum, Inflammation ...	2	13	11	15	...	
Ascites ...	...	3	...	3	...	
Other Diseases ...	2	79	45	81	1	
DISEASES OF THE LYMPHATIC SYSTEM.						
Bubo ...	7	210	...	217	8	
Spleen, Inflammation ...	...	1	1	1	...	
Gangrene ...	...	...	...	...	...	
Rupture ...	...	...	...	...	...	
Glands, Inflammation ...	...	14	...	14	...	
Suppuration ...	...	...	...	...	...	
Goitre ...	...	...	...	...	...	
Hæmorrhoids ...	...	...	...	...	...	
Other Diseases ...	1	8	...	9	...	
DISEASES OF THE URINARY SYSTEM.						
Bright's Disease ...	3	74	40	77	4	
Nephritis, Acute ...	3	8	8	11	...	
Chronic ...	...	16	9	16	2	
Pyelitis ...	...	1	1	1	...	
Renal Calculus ...	...	4	...	4	...	
Cystitis ...	1	10	3	11	...	
Calculus ...	...	6	...	6	1	
Urine, Retention of ...	...	6	...	6	1	
Pyonephrosis ...	...	...	...	...	...	
Other Diseases ...	1	5	1	6	1	
<i>Carried forward ...</i>	1,163	12,912	1,905	14,075	1,281	

## Return of Diseases and Deaths in 1913 at the Singapore Hospitals.—Continued.

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	1,163	12,912	1,905	14,075	1,281	
DISEASES OF THE GENERATIVE SYSTEM.						
(MALE ORGANS.)						
Abscess ...	...	...	...	...	...	
Stricture ...	1	14	...	15	...	
Urethral Fistula ...	...	4	...	4	...	
Extravasation of Urine ...	...	2	1	2	...	
Impacted Calculus ...	...	...	...	...	...	
Prostate Hypertrophy ...	...	...	...	...	...	
Phimosis ...	13	25	...	38	1	
Paraphimosis ...	...	...	...	...	...	
Ulcer of Penis ...	...	2	...	2	...	
Soft Chancre ...	2	91	...	93	17	
Scrotum, Abscess ...	...	5	...	5	...	
Sloughing ...	...	...	...	...	...	
Hæmatocele ...	1	...	...	1	...	
Balanitis ...	...	4	...	4	...	
Epididymitis ...	...	4	...	4	...	
Hydrocele ...	...	40	...	40	2	
Orchitis ...	...	17	...	17	1	
Abscess Testis ...	...	2	...	2	1	
Hernia ...	...	7	...	7	...	
Perineal Abscess ...	...	5	...	5	...	
Other Diseases ...	...	28	...	28	1	
(FEMALE ORGANS.)						
Metritis ...	...	...	...	...	...	
Endometritis ...	2	6	...	8	2	
Erosion of Cervix ...	...	5	...	5	...	
Prolapsus ...	...	2	...	2	...	
Salpingitis ...	...	4	1	4	...	
Vulva, Inflammation ...	...	...	...	...	...	
Abscess ...	...	1	...	1	...	
Ulcer ...	...	2	...	2	...	
Soft Chancre ...	...	24	...	24	1	
Fistula Vesico, Vaginal ...	...	...	...	...	...	
Pelvic Cellulitis ...	...	...	...	...	...	
Dysmenorrhœa ...	...	4	...	4	...	
Sapremia ...	...	2	...	2	...	
Other Diseases ...	10	17	1	27	1	
AFFECTIONS CONNECTED WITH PREGNANCY.						
Abortion ...	...	4	...	4	...	
Pregnancy ...	5	327	6	332	12	
Other Diseases ...	...	...	...	...	...	
DISEASES OF THE FEMALE BREAST.						
Mastitis ...	...	4	...	4	2	
DISEASES OF THE ORGANS OF LOCOMOTION.						
Periostitis ...	...	7	...	7	1	
Caries ...	4	...	1	4	...	
Necrosis ...	2	8	1	10	...	
Arthritis ...	18	305	2	323	8	
Synovitis ...	4	27	...	31	3	
Ankylosis ...	...	3	...	3	...	
Curvature ...	...	...	...	...	...	
Caries of Spine ...	...	7	1	7	2	
Lumbago ...	...	12	...	12	...	
Other Diseases ...	3	145	1	148	13	
<i>Carried forward ...</i>	1,228	14,078	1,920	15,306	1,349	



*Return of Diseases and Deaths in 1913 at the Singapore Hospitals.—Concluded.*

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	1,228	14,078	1,920	15,306	1,349	
DISEASES OF THE CONNECTIVE TISSUE.						
Cellulitis ...	4	42	5	46	2	
Abscess ...	16	311	3	327	10	
Œdema ...	...	6	1	6	...	
Gangrene ...	2	3	1	5	1	
Elephantiasis ...	...	8	...	8	...	
Other Diseases ...	...	...	...	...	...	
DISEASES OF THE SKIN.						
Urticaria ...	...	1	...	1	...	
Eczema ...	3	188	...	191	9	
Impetigo ...	3	14	...	17	...	
Boil ...	...	20	...	20	...	
Carbuncle ...	1	9	1	10	1	
Herpes ...	1	5	...	6	...	
Bedsore ...	...	...	...	...	...	
Pemphigus ...	...	1	...	1	1	
Psoriasis ...	...	7	...	7	...	
Dermatitis exfoliativa ...	...	9	...	9	1	
Onychia ...	...	4	...	4	...	
Corn ...	...	...	...	...	...	
Whitlow ...	...	1	...	1	...	
Ulcer ...	76	1,444	2	1,570	105	
Other Diseases ...	1	13	...	14	...	
INJURIES ...	49	1,554	66	1,603	53	
POISONS ...	...	8	...	8	1	
TUMOURS ...	...	4	...	4	1	
PARASITES ...	...	3	...	3	...	
Round Worm ...	...	...	...	...	...	
Tape-worm ...	...	1	...	1	...	
Ankylostoma Duodenale ...	29	405	51	434	...	
Filariasis ...	...	1	...	1	...	
Scabies ...	8	198	...	206	6	
Ringworm ...	...	56	...	56	1	
Dhoby Itch ...	...	...	...	...	...	
Others ...	1	78	11	79	24	
OBSERVATIONS ...	4	519	...	523	8	
NO DISCOVERABLE DISEASE ...	3	214	...	217	3	
<i>TOTAL ...</i>	1,429	19,205	2,061	20,634	1,576	

## PENANG AND DINDINGS.

*Return of the Statistics of Population for the Year 1913.*

						Europeans.	Eurasians.	Malays.	Chinese.	Indians.	Other Nationalities.	TOTAL.
Number of inhabitants in 1913	...	...	...	...	...	1,012	1,557	36,277	79,748	23,999	1,659	144,252 P.
						17	5	5,035	1,812	1,513	21	8,403 D.
„ Births during the year 1913	...	...	...	...	...	29	40	1,205	1,937	485	87	3,783 P.
						...	...	191	27	34	2	254 D.
„ Deaths „ „ 1913	...	...	...	...	...	11	29	1,009	2,928	980	112	5,069 P.
						...	...	145	81	74	2	302 D.
„ Immigrants „ 1913	...	...	...	...	...	...	...	...	66,819	118,583	...	
„ Emigrants „ 1913	...	...	...	...	...	...	...	...	...	70,090	...	
Number of inhabitants in 1912	...	...	...	...	...	1,005	1,546	36,022	79,185	23,830	1,648	143,236 P.
						16	5	4,876	1,755	1,465	20	8,137 D.
Increase ... ..	...	...	...	...	...	7	11	255	563	169	11	1,016 P.
or	...	...	...	...	...	1	...	159	57	48	1	266 D.
Decrease ... ..	...	...	...	...	...	...	...	...	...	...	...	...

Race or Nationality should be specified, as nearly as possible, in accordance with the above model.

*Meteorological Return for the Year 1913.*

			TEMPERATURE.					RAINFALL.		WINDS.		REMARKS.	
			Solar Maximum.	Minimum on Grass.	Shade Maximum.	Shade Minimum.	Range.	Mean.	Amount in Inches.	Degree of Humidity.	General Direction.		Average Force.
January	...	...	°F 152°0	°F 70°0	°F 92°0	°F 70	°F Not recorded.	°F 81°1	Inches. 6°15	% 74°0	Not recorded.	Not recorded.	
February	...	...	157°5	70°0	95°5	72		82°9	1°18	68°0			
March	...	...	157°0	70°0	97°0	73		83°1	3°80	72°0			
April	...	...	157°0	71°0	93°0	73		82°2	3°39	82°0			
May	...	...	153°0	70°0	95°0	72		81°3	16°14	82°0			
June	...	...	155°0	70°0	92°5	71		82°0	10°47	77°0			
July	...	...	150°0	70°0	91°0	76		81°0	4°58	78°0			
August	...	...	151°0	72°0	91°0	71		80°5	6°15	79°0			
September	...	...	148°0	70°0	91°0	70		79°6	22°86	84°0			
October	...	...	157°0	72°0	92°0	71		79°4	16°88	84°0			
November	...	...	150°0	71°0	90°0	70		80°1	18°56	82°0			
December	...	...	150°0	71°0	90°5	71		80°3	4°62	79°0			
Mean	...	...	153°12	70°5	92°5	71°6	...	81°1	9°56	78°4	...	...	.

## PENANG.

*Return of Diseases and Deaths in 1913 at the following Institutions:—General Hospital, District Hospital, Venereal Wards, Prison Hospital, Quarantine Camp, Jelutong, Balik Pulau, Leper Hospital, Pulau Jerejak, Lumut Hospital, Female Leper Ward, Jelutong, and Female Ward, District Hospital, and New Quarantine Station, Pulau Jerejak.*

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
INFECTIVE DISEASES.						
Beri-beri	18	109	13	127	7	
Chicken-pox	2	70	...	72	5	
Cholera	...	14	13	14	...	
Dengue	...	5	...	5	2	
Diphtheria	...	3	1	3	...	
Dysentery	11	365	81	376	22	
Enteric Fever	1	14	1	15	2	
Enteritis	...	1	1	1	...	
Erysipelas	...	2	1	2	...	
Gangrene	2	3	1	5	...	
Gonorrhœa	6	177	...	183	8	
Leprosy	443	176	190	619	389	
Malaria (unclassified)	3	710	28	713	1	
" Benign Tertian	26	626	2	652	8	
" Sub-Tertian	...	25	7	25	1	
" Quartan	...	1	...	1	...	
" Malignant	6	102	29	108	11	
Malarial Cachexia	5	151	41	156	3	
Measles	...	26	1	26	1	
Mumps	1	5	...	6	...	
Osteo-Myelitis	...	3	...	3	1	
Phagedœna	2	3	2	5	...	
Plague	...	1	1	1	...	
Pneumonia	4	78	34	82	6	
Pyæmia	...	2	1	2	...	
Pyrexia of uncertain origin	...	143	...	143	10	
Rheumatism	30	415	...	445	22	
Septicæmia	...	1	1	1	...	
Small-pox	...	26	3	26	3	
Syphilis	...	19	...	19	...	
" Primary	5	92	...	97	16	
" Secondary	36	328	* 3	364	40	
" Tertiary	2	62	10	64	4	
Tetanus	...	7	5	7	...	
Tuberculosis	1	19	2	20	...	
Whooping cough	...	2	...	2	...	
Yaws	...	1	...	1	...	
Vaccinia	...	2	...	2	...	
INTOXICATIONS.						
Alcoholism	...	16	...	16	...	
Opium habit	...	1	..	1	...	
" colic	...	1	...	1	...	
GENERAL DISEASES NOT INCLUDED IN THE TWO PRECEDING GROUPS.						
Anæmia	13	87	16	100	6	
Diabetes	...	1	...	1	1	
Osteo Arthritis	3	15	...	18	1	
Senile Decay	2	25	16	27	2	
Debility	1	26	3	27	1	
Marasmus	...	2	1	2	...	
Carried forward	623	3,963	508	4,586	573	

\* Pericarditis 1.



## Return of Diseases and Deaths in 1913 at the Penang Hospitals.—Continued.

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward...</i>	623	3,963	508	4,586	573	
CERTAIN MORBID CONDITIONS INCIDENT TO VARIOUS PARTS.						
New Growths, Malignant ...	1	21	7	22	3	
„ Non-Malignant ...	...	7	...	7	1	
DISEASES OF THE NERVOUS SYSTEM.						
Neuritis ...	2	17	...	19	4	
Meningitis ...	...	4	4	4	...	
Myelitis ...	...	1	1	1	...	
Progressive Muscular Atrophy ...	...	1	...	1	...	
Spastic Paraplegia ...	6	14	5	20	3	
Locomotor Ataxia ...	...	10	1	10	2	
Acute Ascending Paralysis ...	...	1	...	1	1	
Septic Meningitis ...	...	1	1	1	...	
Cerebral Hæmorrhage ...	...	6	4	6	1	
Paraplegia ...	1	12	...	13	4	
Hemiplegia ...	7	30	9	37	7	
Epilepsy ...	...	12	2	12	...	
Tetany ...	...	1	...	1	1	
Headache ...	...	6	...	6	...	
Neuralgia ...	...	4	...	4	...	
Sciatica ...	...	2	...	2	...	
Insomnia ...	...	1	...	1	...	
Hysteria ...	...	2	...	2	...	
Neurasthenia ...	...	1	...	1	...	
Mania ...	...	13	1	13	...	
Melancholia ...	...	2	...	2	1	
Insanity, Acute Delusional ...	...	2	...	2	...	
Dementia ...	3	12	...	15	...	
DISEASES OF THE EYE.						
Conjunctivitis ...	3	177	...	180	...	
„ Purulent ...	1	31	...	32	6	
Trachoma ...	1	21	...	22	5	
Pterygium ...	...	3	...	3	...	
Keratitis ...	2	1	...	3	...	
Ulcer Cornea ...	3	31	...	34	2	
Opacity Cornea ...	1	12	...	13	...	
Staphyloma ...	...	2	...	2	1	
Iritis ...	2	35	...	37	6	
Hypopyon ...	...	2	...	2	1	
Optic Atrophy ...	1	5	...	6	2	
Cataract ...	3	19	...	22	3	
Panophthalmitis ...	...	3	...	3	...	
Amaurosis ...	18	25	...	43	17	
Anæmia of Retina ...	...	1	...	1	1	
Lacrymal Abscess ...	...	2	...	2	...	
Sty ...	...	6	...	6	...	
Ecchymosis ...	...	2	...	2	...	
Entropion ...	2	1	...	3	...	
Ectropion ...	...	4	...	4	...	
DISEASES OF THE EAR.						
Otitis Media ...	...	57	...	57	...	
Mastoid Abscess ...	...	1	...	1	...	
DISEASES OF THE NOSE.						
Rhinitis ...	...	1	...	1	...	
Coryza ...	...	1	...	1	...	
Hypertrophy Inf. Turbinated ...	...	1	...	1	...	
<i>Carried forward...</i>	680	4,590	543	5,270	645	

## Return of Diseases and Deaths in 1913 at the Penang Hospitals.—Continued.

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	680	4,590	543	5,270	645	
DISEASES OF THE CIRCULATORY SYSTEM.						
Endocarditis ...	...	2	2	2	...	
Val. Disease Heart ...	1	9	4	10	1	
"    Mitral ...	2	42	19	44	7	
Myocardia ...	...	1	1	1	...	
Degeneration of Heart ...	...	1	1	1	...	
Dilatation Heart ...	...	5	...	5	1	
Tachycardia ...	...	1	...	1	...	
Arterio Sclerosis ...	...	1	...	1	...	
Aneurysm ...	3	7	1	10	1	
Embolism ...	...	1	1	1	...	
DISEASES OF THE RESPIRATORY SYSTEM.						
Asthma ...	2	29	2	31	4	
Laryngitis ...	...	1	...	1	...	
Bronchitis ...	18	333	6	351	12	
Hæmoptysis ...	...	1	1	1	...	
Broncho-pneumonia ...	1	8	3	9	...	
Gangrene Lungs ...	...	1	1	1	...	
Phthisis ...	21	219	126	240	15	
Pleurisy ...	1	11	...	12	1	
Emphysema ...	...	2	...	2	...	
Empyema ...	...	7	1	7	1	
DISEASES OF THE DIGESTIVE SYSTEM.						
Stomatitis ...	1	11	...	12	1	
Supp. Frontal Sinuses ...	...	1	...	1	...	
Cancrum Oris ...	...	1	...	1	...	
Pyorrhoea Alveolaris ...	...	12	1	12	...	
Sorethroat ...	...	3	...	3	...	
Acute Gastritis ...	...	3	...	3	...	
Tonsillitis ...	...	9	...	9	...	
Peritonsillar Abscess ...	...	1	...	1	...	
Pharyngitis ...	1	14	...	15	2	
Gastritis ...	2	48	1	50	2	
Gastric Ulcer ...	1	...	...	1	...	
Hæmatemesis ...	...	2	...	2	...	
Dilatation Stomach ...	...	1	...	1	...	
Dyspepsia ...	3	93	* 1	96	3	
Sea sickness ...	...	1	...	1	...	
Enteritis ...	...	11	1	11	1	
Appendicitis ...	...	7	1	7	...	
Colitis ...	...	9	...	9	2	
Sprue ...	...	3	1	3	...	
Hernia Inguinal ...	...	16	...	16	2	
"    Strang. Gangrenous ...	...	1	1	1	...	
Diarrhoea ...	13	380	110	393	11	
Constipation ...	...	227	...	227	...	
Colic ...	...	72	...	72	...	
Ischio-rectal Abscess ...	...	3	...	3	2	
Fistula in Ano ...	2	15	...	17	3	
Perineal Sinus ...	...	1	...	1	...	
Hæmorrhoids ...	...	22	...	22	...	
Recto Vaginal Fistula ...	...	1	...	1	1	
Prolapse Rectum ...	1	4	...	5	1	
Cholecystitis ...	...	2	1	2	...	
Imperforate Anus ...	...	1	1	1	...	
Hepatitis ...	...	7	...	7	...	
Hepatic Abscess ...	1	8	4	9	2	
Cirrhosis Liver ...	4	27	11	31	1	
Jaundice ...	...	4	1	4	...	
Acute Peritonitis ...	...	3	3	3	...	
Ascites ...	...	11	1	11	1	
<i>Carried forward ...</i>	758	6,307	851	7,065	723	

\* Diarrhoea.

## Return of Diseases and Deaths in 1913 at the Penang Hospitals.—Continued.

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	758	6,307	851	7,065	723	
DISEASES OF THE LYMPHATIC SYSTEM.						
Splenitis ...	...	4	...	4	...	
Tubercular Gran. of Spleen and Abdominal Wall ...	...	1	1	1	...	
Bubo ...	5	127	...	132	12	
Adenitis ...	...	8	...	8	2	
Adenoids c Enlarged Turbi- nated bone ...	...	1	...	1	...	
Supp. Gland neck ...	1	1	...	2	1	
Tubercular Gland neck ...	...	2	...	2	...	
Lymphangitis ...	1	5	1	6	1	
Elephantiasis ...	...	1	...	1	...	
DISEASES OF THE URINARY SYSTEM.						
Nephritis ...	...	43	13	43	3	
Bright's Disease ...	13	114	46	127	11	
Renal Calculus ...	...	2	...	2	...	
Cystitis ...	2	3	...	5	...	
Retention of Urine ...	...	5	...	5	...	
DISEASES OF THE GENERATIVE SYSTEM.						
(MALE ORGANS.)						
Stricture Urethra ...	1	8	...	9	...	
Phimosis ...	...	50	...	50	2	
Paraphimosis ...	...	5	...	5	...	
Abscess Penis ...	...	1	...	1	...	
Ulcer Penis ...	...	65	...	65	10	
Gangrene Penis ...	...	1	...	1	1	
Soft Chancre ...	7	188	...	195	6	
Condyloma ...	...	1	...	1	...	
Abscess Scrotum ...	...	2	...	2	...	
Ulcer Scrotum ...	...	3	...	3	...	
Sloughing Scrotum ...	...	3	...	3	1	
Varicocele ...	...	2	...	2	...	
Hydrocele ...	...	11	...	11	1	
Gangrene Scrotum ...	...	1	1	1	...	
Orchitis ...	...	11	...	11	2	
Epididymitis ...	...	3	...	3	...	
Abscess Testicle ...	...	2	...	2	...	
Hernia Testis ...	...	11	...	11	2	
(FEMALE ORGANS.)						
Salpingitis ...	...	1	...	1	...	
Oophoritis ...	...	2	...	2	...	
Metritis ...	...	40	...	40	...	
Endometritis ...	...	3	...	3	...	
Erosion ...	1	19	...	20	2	
Vaginitis ...	...	2	...	2	...	
Prolapse Vagina ...	...	1	...	1	...	
Fistula Vesico Vaginal ...	...	1	...	1	...	
Abscess Labia ...	...	1	...	1	...	
Ulcer Vulva ...	3	8	...	11	1	
Condyloma ...	...	1	...	1	...	
Amenorrhœa ...	...	1	...	1	...	
Dysmenorrhœa ...	...	1	...	1	...	
Menorrhagia ...	1	1	...	2	...	
Leucorrhœa ...	...	13	...	13	1	
Pelvic Abscess ...	...	1	1	1	...	
<i>Carried forward ...</i>	793	7,088	914	7,881	782	



## Return of Diseases and Deaths in 1913 at the Penang Hospitals.—Continued.

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	793	7,088	914	7,881	782	
AFFECTIONS CONNECTED WITH PREGNANCY.						
Hæmorrhage ...	...	2	...	2	...	
Abortion ...	...	1	...	1	...	
Pregnancy ...	1	25	1	26	...	
AFFECTIONS CONNECTED WITH PARTURITION.						
Rupture Perineum ...	...	1	...	1	...	
Premature birth ...	...	1	1	1	...	
AFFECTIONS CONSEQUENT ON PARTURITION.						
Puerperal Insanity ...	...	1	...	1	...	
DISEASES OF THE FEMALE BREAST.						
Mammary Abscess ...	...	3	...	3	1	
DISEASES OF THE ORGANS OF LOCOMO- TION.						
Osteitis ...	...	1	...	1	...	
Necrosis bone ...	2	3	...	5	...	
Ununited Fracture Femur ...	...	1	...	1	1	
Arthritis ...	5	22	1	27	1	
Synovitis ...	2	27	...	29	6	
Dislocation Elbow ...	...	1	...	1	...	
" Spine ...	...	1	...	1	...	
Myalgia ...	3	13	...	16	...	
Lumbago ...	1	7	...	8	2	
Tenosynovitis ...	...	2	...	2	...	
DISEASES OF THE CONNECTIVE TISSUE.						
Cellulitis ...	1	46	3	47	3	
Abscess ...	3	161	1	164	8	
Sinus ...	...	9	...	9	...	
Elephantiasis ...	1	7	...	8	1	
Erysipelas ...	...	1	...	1	1	
DISEASES OF THE SKIN.						
Urticaria ...	...	2	...	2	...	
Eczema ...	3	47	...	50	2	
Impetigo ...	...	13	...	13	...	
Boils ...	...	40	...	40	...	
Carbuncle ...	...	5	...	5	...	
Pemphigus ...	...	3	...	3	...	
Dermatitis ...	...	6	...	6	...	
Psoriasis ...	...	1	...	1	...	
Ichthyosis ...	...	1	...	1	...	
Lupus Vulgaris ...	...	2	...	2	...	
Ulcers ...	104	1,106	* 3	1,210	39	
Corn ...	...	1	...	1	...	
Sebaceous Cyst ...	...	1	...	1	...	
Sinus ...	5	19	...	24	2	
Whitlow ...	...	3	...	3	...	
General Injuries ...	4	93	6	97	4	
Local " ...	18	444	12	462	19	
<i>Carried forward ...</i>	946	9,211	942	10,157	872	

\* Diarrhœa 1.

## Return of Diseases and Deaths in 1913 at the Penang Hospitals.—Concluded.

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward</i> ...	946	9,211	942	10,157	872	
POISONS.						
Pig bite ...	...	1	...	1	1	
Dog bite ...	...	3	...	3	...	
Insect bite ...	...	1	...	1	...	
Chronic copper Poisoning ...	...	3	...	3	...	
Hornet sting ...	...	1	...	1	...	
Lysol Poisoning ...	...	1	1	1	...	
Morphia Poisoning ...	...	1	1	1	...	
PARASITES.						
Tinea Imbricata ...	...	16	...	16	...	
Ankylostomiasis ...	13	93	25	106	13	
Scabies ...	4	143	...	147	2	
Ascaris Lumbricoides ...	...	7	...	7	...	
Pediculosis Corporis ...	...	2	...	2	...	
Guinea Worms ...	...	10	...	10	...	
Malingering ...	...	28	...	28	...	
No Appreciable Disease ...	...	16	...	16	1	
Observation ...	9	67	...	76	1	
Lunacy ...	...	127	...	127	8	
MALFORMATION.						
Harelip ...	...	1	...	1	1	
OPERATIONS.						
Circumcision ...	...	1	...	1	...	
Amputation Leg ...	...	2	...	2	2	
GRAND TOTAL ...	972	9,735	969	10,707	901	

## PROVINCE WELLESLEY.

*Return of the Statistics of Population for the Year 1913.*

					Europeans.	Eurasians.	Malays.	Chinese.	Indians.	Other Nationalities.	Nationality Unknown.	TOTAL.
Number of inhabitants in 1913	...				254	202	75,092	32,713	22,664	985	...	131,910
" Births during the year 1913					3	9	2,517	772	641	15	...	3,957
" Deaths " " 1913					...	1	1,975	960	827	11	1	3,775
" Immigrants " 1913					}	No data available.						
" Emigrants " 1913												
Number of inhabitants in 1912	...				252	200	74,462	32,438	22,474	977	...	130,803
Increase ... ..	...	...	...	...	2	2	630	275	190	8	...	1,107
or												
Decrease ... ..	...	...	...	...	...	...	...	...	...	...	...	...

Race or Nationality should be specified, as nearly as possible, in accordance with the above model.

*Meteorological Return for the Year 1913.*

				TEMPERATURE.						RAINFALL.		WINDS.		REMARKS.
				Solar Maximum.	Minimum on Grass.	Shade Maximum.	Shade Minimum.	Range.	Mean.	Amount in Inches.	Degree of Humidity.	General Direction.	Average Force.	
				°F	°F	°F	°F	°F	°F	Inches.	%			
January	...	...	...	148.0	67.8	89.9	70.5	19.4	80.2	6.70	75.0	N.W.	6	
February	...	...	...	158.8	71.7	93.8	72.3	21.5	83.0	2.11	71.0	S.W.	4	
March	...	...	...	155.4	73.2	92.5	73.5	19.0	83.0	7.84	74.0	N.W.	4	
April	...	...	...	149.2	73.7	90.5	74.2	16.3	82.4	9.34	81.0	S.W.	4	
May	...	...	...	150.7	73.4	90.4	74.1	16.3	82.2	11.84	79.0	S.W.	4	
June	...	...	...	147.5	72.8	90.5	73.9	16.6	82.2	10.79	78.0	S.W.	5	
July	...	...	...	145.8	71.8	90.9	73.4	17.5	82.2	3.33	77.0	S.W.	5	
August	...	...	...	146.0	71.4	90.7	77.2	13.5	83.9	2.89	76.0	S.W.	4	
September	...	...	...	146.3	72.0	90.0	72.3	17.7	81.1	14.50	80.0	N.W.	6	
October	...	...	...	146.0	71.9	88.5	72.4	16.1	80.4	17.19	81.0	N.W.	6	
November	...	...	...	157.0	71.1	88.9	72.1	16.8	80.5	16.98	80.0	N.W.	6	
December	...	...	...	151.8	72.2	88.8	72.4	16.4	80.6	3.79	78.0	N.W.	4	
Mean	...	...	...	150.2	71.9	90.4	73.2	17.2	81.8	Total 107.30	77.0	...	...	



## PROVINCE WELLESLEY.

*Return of Diseases and Deaths in 1913 at the following Institutions:—  
 Butterworth, Bukit Mertajam and Sungai Bakap Hospitals.*

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
INFECTIVE DISEASES.						
Beri-beri ...	2	31	* 3	33	5	
Chicken-pox ...	...	3	...	3	...	
Dysentery ...	6	186	† 50	192	3	
Enteric fever ...	...	3	2	3	...	
Erysipelas ...	...	1	* 1	1	...	
Gangrene thigh ...	...	1	1	1	...	
Gonorrhœa ...	1	118	...	119	6	
Gonorrhœal Arthritis ...	...	23	...	23	1	
"    Ophthalmia ...	1	4	...	5	...	
Leprosy ...	...	20	* 1	20	1	
Malarial Fever, B. Tertian ...	...	259	...	259	9	
"    Quartan ...	...	8	...	8	...	
"    Malignant ...	6	242	‡ 29	248	9	
Malarial Cachexia ...	2	52	1	54	3	
Measles ...	...	4	...	4	2	
Phagedæna ...	4	50	2	54	5	
Pneumonia ...	1	37	§ 12	38	...	
Pyæmia ...	1	6	2	7	...	
Pyrexia ...	...	92	...	92	3	
Rheumatism ...	...	28	...	28	1	
Small-pox ...	...	11	2	11	...	
Syphilis, Primary ...	1	31	...	32	1	
"    Secondary ...	7	240	* 3	247	7	
"    Tertiary ...	3	42	1	45	4	
Tuberculosis ...	1	16	* 7	17	2	
Yaws ...	...	2	...	2	...	
INTOXICATIONS.						
Alcoholism ...	...	9	...	9	...	
Mercurialism ...	...	2	...	2	...	
Morphianism ...	...	1	...	1	...	
GENERAL DISEASES NOT INCLUDED IN THE TWO PRECEDING GROUPS.						
Diabetes Mellitus ...	...	2	...	2	1	
CERTAIN MORBID CON- DITIONS INCIDENT TO VARIOUS PARTS.						
Lymphadenoma ...	...	1	...	1	...	
New-growth, Non-Malignant ...	..	5	...	5	2	
"    Malignant ...	...	12	* 8	12	...	
Cyst ...	...	2	...	2	...	
DISEASES OF THE NERVOUS SYSTEM.						
Multiple Neuritis ...	1	18	1	19	1	
Sciatica ...	...	5	...	5	...	
Myelitis ...	...	7	4	7	1	
Progressive Muscular Atrophy ...	...	1	...	1	1	
Spastic Paraplegia ...	...	5	...	5	2	
Locomotor Ataxy ...	...	3	...	3	...	
Meningitis ...	...	2	* 2	2	...	
Hemiplegia ...	6	22	¶ 4	28	3	
Pleurodynia ...	...	2	...	2	...	
Carried forward ...	43	1,609	136	1,652	73	

1 within 48 hours. † 19 within 48 hours. ‡ 15 within 48 hours. § 5 within 48 hours. ¶ 2 within 48 hours.

*Return of Diseases and Deaths in 1913 at the Province Wellesley  
Hospitals.—Continued.*

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	43	1,609	136	1,652	73	
DISEASES OF THE NERVOUS SYSTEM.— <i>Continued.</i>						
Monoplegia ...	...	1	...	1	...	
Torticollis ...	1	1	...	2	...	
Uræmia ...	...	1	* 1	1	...	
Epilepsy ...	...	5	...	5	...	
Cephalalgia ...	...	10	...	10	...	
Neuralgia ...	1	3	...	4	...	
DISEASES OF THE EYE.						
Conjunctivitis ...	...	6	...	6	...	
Pterygium ...	...	3	...	3	...	
Keratitis ...	...	3	...	3	...	
Ulcer Cornea ...	2	11	...	13	...	
Opacity Cornea ...	1	1	...	2	1	
Staphyloma Cornea ...	...	1	...	1	...	
Iritis ...	...	5	...	5	1	
Cataract ...	1	3	...	4	...	
Panophthalmitis ...	...	2	...	2	...	
Lacrymal Abscess ...	...	1	...	1	...	
Dacryo-Cystitis ...	...	2	...	2	...	
DISEASES OF THE EAR.						
Auricular Abscess ...	...	1	...	1	...	
Otitis Media ...	...	5	...	5	...	
„ Interna ...	...	1	...	1	...	
DISEASES OF THE NOSE.						
Coryza ...	...	1	...	1	...	
Caries Nasal Septum ...	...	1	...	1	...	
DISEASES OF THE CIRCULATORY SYSTEM.						
Pericarditis ...	...	2	* 2	2	...	
Endocarditis ...	...	2	* 2	2	...	
Valvular Disease, Heart ...	3	31	10	34	2	
Dilatation of Heart ...	...	5	† 2	5	...	
Aneurysm ...	...	1	...	1	...	
Varix ...	...	2	...	2	...	
DISEASES OF THE RESPIRATORY SYSTEM						
Asthma ...	...	9	...	9	...	
Laryngitis ...	...	1	...	1	...	
Bronchitis ...	1	82	* 4	83	4	
Broncho-Pneumonia ...	...	14	...	14	...	
Phthisis ...	2	96	‡ 53	98	7	
Emphysema ...	...	2	...	2	...	
Pleurisy ...	...	7	...	8	...	
Empyema ...	...	1	* 1	1	...	
Hæmothorax ...	...	1	1	1	...	
<i>Carried forward ...</i>	56	1,934	212	1,990	88	

\* 1 within 48 hours.

† 2 within 48 hours.

‡ 9 within 48 hours.

*Return of Diseases and Deaths in 1913 at the Province Wellesley  
Hospitals.—Continued.*

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	56	1,934	212	1,990	88	
<b>DISEASES OF THE DIGESTIVE SYSTEM.</b>						
Stomatitis ...	...	1	...	1	...	
Caries Tooth ...	...	5	...	5	...	
Alveolar Abscess ...	...	1	...	1	1	
Tonsillitis ...	...	2	...	2	...	
Pharyngitis ...	...	4	...	4	...	
Gastritis ...	...	8	...	8	1	
Dilatation Stomach ...	...	1	...	1	...	
Dyspepsia ...	...	12	...	12	...	
Gastralgia ...	...	7	...	7	...	
Enteritis ...	2	51	* 14	53	1	
Colitis ...	...	6	...	6	...	
Appendicitis ...	...	2	...	2	...	
Sprue ...	...	1	...	1	...	
Hernia, Inguinal ...	...	7	...	7	...	
Bubonacele ...	...	2	...	2	...	
Volvulus Intestine ...	...	1	† 1	1	...	
Obstruction Intestine ...	...	1	1	1	...	
Diarrhœa ...	...	29	† 6	29	1	
Constipation ...	...	5	...	5	...	
Colic, Intestinal ...	...	17	...	17	...	
Fissure Ani ...	...	1	...	1	...	
Fistula in Ano ...	...	2	...	2	...	
Hæmorrhoids ...	...	6	...	6	...	
Anal Abscess ...	...	3	...	3	...	
Ischiorectal Fistula ...	...	2	...	2	...	
Prolapsus Ani ...	...	1	...	1	...	
Hepatitis ...	...	5	...	5	...	
Cirrhosis of Liver ...	2	20	16	22	2	
Jaundice ...	...	3	1	3	...	
Gall-stone ...	...	1	...	1	...	
Peritonitis ...	...	2	† 1	2	...	
<b>DISEASES OF THE LYMPHATIC SYSTEM.</b>						
Lymphadenitis ...	...	11	...	11	...	
Bubo ...	2	52	...	54	4	
<b>DISEASES OF THE URINARY SYSTEM.</b>						
Nephritis (Acute) ...	...	1	...	1	...	
" (Chronic) ...	2	43	14	45	2	
Cystitis ...	...	2	...	2	...	
Albuminuria ...	...	2	...	2	...	
<b>DISEASES OF THE GENERATIVE SYSTEM.</b>						
<b>MALE ORGANS.</b>						
Stricture Urethra ...	...	5	...	5	...	
Urethral Fistula ...	1	1	...	2	...	
Phimosis ...	1	4	...	5	...	
Chancroids ...	4	138	...	142	5	
Condyloma ...	...	1	...	1	1	
<i>Carried forward ...</i>	70	2,403	266	2,473	106	

\* 2 within 48 hours. † 1 within 48 hours.



*Return of Diseases and Deaths in 1913 at the Province Wellesley  
Hospitals.—Continued.*

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	70	2,403	266	2,473	106	
DISEASES OF THE GENERATIVE SYSTEM. —Continued.						
MALE ORGANS.—Contd.						
Sloughing Scrotum ...	I	2	...	3	...	
Hydrocele ...	...	6	* I	6	...	
Orchitis ...	...	5	...	5	...	
Epididymitis ...	...	I	...	I	...	
Hernia Testis ...	...	4	...	4	...	
FEMALE ORGANS.						
Oophoritis ...	...	I	...	I	...	
Retroversion Uterus ...	...	I	...	I	...	
Vaginitis ...	...	I	...	I	...	
Amenorrhœa ...	...	2	...	2	...	
Dysmenorrhœa ...	I	I	...	2	...	
Menorrhagia ...	...	I	...	I	...	
Abortion ...	...	I	...	I	...	
Impacted head present ...	...	I	...	I	...	
Parturition ...	...	2	...	2	...	
Puerperal Sapræmia ...	...	2	I	2	I	
DISEASES OF THE ORGANS OF LOCOMOTION.						
Periostitis ...	I	3	...	4	...	
Osteomyelitis Tibia ...	...	I	...	I	I	
Necrosis of bone ...	I	9	...	10	I	
Arthritis ...	2	15	2	17	I	
Synovitis ...	...	8	...	8	I	
Ankylosis ...	I	2	...	3	...	
Myalgia ...	I	16	...	17	...	
Lumbago ...	...	2	...	2	...	
Gangrene, Tendon ...	...	I	...	I	...	
Teno-synovitis ...	...	I	...	I	...	
DISEASES OF THE CONNECTIVE TISSUE.						
Cellulitis ...	2	22	2	24	2	
Abscess ...	I	72	...	73	4	
Gangrene Finger ...	...	I	...	I	...	
"    Leg ...	...	4	3	4	...	
Elephantiasis ...	I	I	...	2	...	
*DISEASES OF THE SKIN.						
Eczema ...	...	41	...	41	2	
Boil ...	...	6	...	6	...	
Psoriasis ...	...	4	...	4	...	
Pityriasis Rubra ...	...	I	...	I	...	
Lupus ...	...	I	...	I	...	
Onychia ...	...	2	...	2	...	
Whitlow ...	...	I	...	I	...	
<i>Carried forward ...</i>	82	2,648	275	2,730	119	

\* Suppurative.

*Return of Diseases and Deaths in 1913 at the Province Wellesley  
Hospitals.—Concluded.*

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	82	2,648	275	2,730	119	
<b>GENERAL INJURIES.</b>						
Burns and Scalds ...	...	10	...	10	...	
Asphyxia ...	...	1	* 1	1	...	
<b>LOCAL INJURIES.</b>						
Contusions ...	1	33	...	34	1	
Dislocations ...	...	1	...	1	...	
Sprains ...	1	5	...	6	...	
<b>INJURIES OF ANATOMI- CAL REGIONS.</b>						
Head and Neck ...	1	40	...	41	1	
Trunk and Abdomen ...	...	3	...	3	...	
<b>UPPER EXTREMITIES.</b>						
Wounds ...	...	50	...	50	1	
<b>LOWER EXTREMITIES.</b>						
Wounds ...	15	343	...	358	10	
<b>FRACTURES.</b>						
Fracture Skull ...	...	6	* 1	6	...	
Concussion brain ...	...	1	...	1	1	
Fracture Frontal bone ...	...	1	...	1	...	
„ Clavicle ...	...	4	...	4	1	
„ Ribs ...	...	5	...	5	...	
Fracture & dislocation Spine ...	1	...	1	1	...	
„ Upper Extremities ...	2	17	1	19	3	
„ Lower Extremities ...	2	11	...	13	3	
<b>POISONS.</b>						
Opium Poisoning ...	...	1	...	1	...	
<b>POISONED WOUNDS.</b>						
Buffalo-gore ...	...	1	...	1	...	
Dog-bite ...	...	7	...	7	...	
Pig-bite ...	...	3	...	3	...	
Centipede-bite ...	...	3	...	3	...	
Leech-bite ...	...	1	...	1	...	
<b>PARASITES.</b>						
Ankylostomiasis ...	23	322	† 55	345	14	
Scabies ...	1	63	...	64	2	
Ascaris Lumbricoides ...	1	15	...	16	...	
Ringworms ...	...	5	...	5	...	
Filaria Medinensis ...	...	1	...	1	...	
Observation for Insanity ...	4	17	...	21	3	
Observation ...	1	35	...	36	...	
No Appreciable Disease ...	...	12	...	12	...	
Pregnancy ...	...	2	...	2	..	
<b>GRAND TOTAL ...</b>	<b>135</b>	<b>3,667</b>	<b>334</b>	<b>3,802</b>	<b>159</b>	

\* 1 within 48 hours. † 4 within 48 hours.

## MALACCA.

*Return of the Statistics of Population for the Year 1913.*

—				Europeans.	Eurasians.	Malays.	Chinese.	Indians.	Other Nationalities.	TOTAL.
Number of inhabitants in 1912	...			313	1,585	81,203	36,526	7,728	442	127,797
„ Births during the year 1913				6	67	3,400	825	104	104	4,506
„ Deaths „ „ 1913				2	41	3,207	1,525	439	119	5,333
„ Immigrants „ „ 190				}	No data available.					
„ Emigrants „ „ 190										
Number of inhabitants in 1913	...			320	1,622	83,083	37,371	7,907	452	130,755
Increase ... ..	...	...	...	7	37	1,880	845	179	10	2,958
Decrease ... ..	...	...	...	...	...	...	...	...	...	...

Race or Nationality should be specified, as nearly as possible, in accordance with the above model.

*Meteorological Return for the Year 1913.*

—				TEMPERATURE.						RAINFALL.		WINDS.		REMARKS.
				Solar Maximum.	Minimum on Grass.	Shade Maximum.	Shade Minimum.			Amount in Inches.	Degree of Humidity.	General Direction.	Average Force.	
				°F	°F	°F	°F	°F	°F	Ins.	%			
January	...	...	...	140·4	...	86·4	71·7	14·7	80·3	2·52	87·0	N.	...	
February	...	...	...	151·8	...	89·4	72·0	17·4	82·0	3·89	81·0	N.	...	
March	...	...	...	146·3	...	87·6	72·3	15·3	81·7	2·57	84·0	N.	...	
April	...	...	...	150·5	...	88·3	73·4	14·9	83·0	7·86	86·0	N.	...	
May	...	...	...	147·9	...	87·6	73·1	14·5	82·4	7·87	87·0	N.	...	
June	...	...	...	145·0	...	87·5	72·8	14·7	81·9	8·94	88·0	N.W.	...	
July	...	...	...	150·0	...	87·4	72·2	15·2	82·3	4·46	87·0	S.	...	
August	...	...	...	148·6	...	87·2	71·7	15·5	81·9	10·67	88·0	N.W.	...	
September	...	...	...	145·4	...	85·7	71·2	14·5	81·2	15·43	89·0	N.W.	...	
October	...	...	...	148·8	...	86·4	71·8	14·6	81·3	16·51	88·0	N.W.	...	
November	...	...	...	144·8	...	85·3	71·7	13·6	81·0	10·28	89·0	N.W.	...	
December	...	...	...	149·6	...	86·0	71·6	14·4	81·3	2·74	87·0	N.	...	
Year 1912														
Mean	...			147·4	..	87·1	72·1	15·0	81·7	Total 93·74	87·0	N.	...	



## MALACCA.

*Return of Diseases and Deaths in 1913 at the following Institutions:—General, Pauper, Contagious Disease, Leper, Prison, Alor Gajah and Jasin Hospitals.*

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
INFECTIVE DISEASES.						
Beri-beri ...	86	479	36	565	55	
Chicken-pox ...	...	14	...	14	...	
Dysentery ...	15	189	75	204	18	
Erysipelas ...	...	4	2	4	...	
Gangrene ...	...	4	3	4	...	
Gonorrhœa ...	2	90	...	92	13	
Gonorrhœal Rheumatism ...	...	2	...	2	1	
"    Ophthalmia ...	...	1	...	1	...	
Leprosy ...	...	18	1	18	1	
Malaria ...	1	12	...	13	...	
Malaria-fever, Benign T. ...	1	16	...	17	1	
"    Quartan ...	...	7	...	7	1	
"    Malignant ...	52	1,698	119	1,750	70	
"    Chronic ...	7	140	18	147	8	
Malarial Neuritis ...	...	4	...	4	1	
Measles ...	...	2	...	2	...	
Mumps ...	...	2	...	2	...	
Phagedæna ...	1	11	3	12	...	
Pneumonia ...	4	126	53	130	4	
Pyæmia ...	...	1	1	1	...	
Pyrexia ...	...	7	...	7	...	
Rheumatism ...	7	61	...	68	5	
Septicæmia ...	...	2	2	2	...	
Small-pox ...	...	9	1	9	...	
Syphilis ...	8	135	8	143	12	
Tuberculosis ...	...	3	2	3	1	
INTOXICATION.						
Alcoholism ...	...	3	...	3	...	
Opium Habit ...	...	1	...	1	...	
GENERAL DISEASES NOT INCLUDED IN THE TWO PRECEDING GROUPS.						
Anæmia ...	6	36	9	42	...	
Lymphadenoma ...	...	2	1	2	...	
CERTAIN MORBID CONDITIONS INCIDENT TO VARIOUS PARTS.						
New growth, Non-malignant ...	...	4	...	4	...	
"    Malignant ...	...	4	3	4	...	
Ovarian Cyst ...	...	2	2	2	...	
DISEASES OF THE NERVOUS SYSTEM.						
Neuritis ...	3	31	...	34	2	
"    Peripheral ...	...	3	...	3	...	
Myelitis ...	1	1	...	2	2	
Polio Myelitis ...	...	1	...	1	...	
Locomotor Ataxia ...	...	2	...	2	...	
Meningitis ...	...	1	1	1	...	
Hemiplegia ...	1	10	1	11	4	
Paraplegia ...	...	3	...	3	1	
Torticollis ...	...	2	...	2	...	
Eclampsia ...	...	2	2	2	...	
Carried forward ...	195	3,145	343	3,340	200	

*Return of Diseases and Deaths in 1912 at the Malacca Hospitals.—Continued.*

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	195	3,145	343	3,340	200	
DISEASES OF THE NERVOUS SYSTEM.— <i>Continued.</i>						
Head-ache ...	...	1	...	1	...	
Neuralgia ...	1	7	...	8	...	
Neurasthenia ...	...	3	...	3	...	
Mania ...	...	1	1	1	...	
Melancholia ...	...	1	...	1	...	
DISEASES OF THE EYE.						
Conjunctivitis ...	4	19	...	23	3	
Granular Ophthalmia ...	...	3	...	3	...	
Keratitis ...	...	1	...	1	...	
Ulcer Cornea ...	...	16	...	16	3	
Opacity Cornea ...	2	2	...	4	3	
Staphyloma ...	...	3	...	3	...	
Iritis ...	...	3	...	3	...	
Cataract ...	...	2	...	2	...	
Shrunken Eye-ball ...	...	2	...	2	2	
Disorganization Eye-ball ...	...	1	...	1	...	
Nyctalopia ...	...	1	...	1	...	
Dacryo Cystitis ...	...	2	...	2	...	
Blepharitis ...	...	1	...	1	1	
DISEASES OF THE EAR.						
Inflammation Ext. Ear ...	1	4	...	5	...	
Otitis Media ...	...	7	...	7	1	
DISEASES OF THE NOSE.						
Rhinitis ...	...	1	...	1	...	
Ozæna ...	...	1	...	1	...	
DISEASES OF THE CIRCULATORY SYSTEM.						
Mitral Regurgitation ...	...	3	2	3	...	
Hypertrophy Heart ...	...	1	...	1	...	
Dilatation ...	...	1	...	1	...	
DISEASES OF THE RESPIRATORY SYSTEM.						
Asthma ...	...	16	...	16	...	
Ulcer Larynx ...	...	1	...	1	...	
Bronchitis ...	2	62	...	64	3	
Congestion Lung ...	1	13	2	14	...	
Broncho-pneumonia ...	...	4	...	4	...	
Phthisis ...	11	113	61	124	9	
Pleurisy ...	...	11	2	11	...	
Empyema ...	...	3	3	3	...	
DISEASES OF THE DIGESTIVE SYSTEM.						
Ulceration Lip ...	...	1	...	1	...	
Cancrum Oris ...	1	2	...	3	...	
Caries Tooth ...	...	2	...	2	...	
Eruption Wisdom Tooth ...	...	1	...	1	...	
Pyorrhœa Alveolaris ...	...	2	...	2	1	
Ulceration Gum ...	...	1	...	1	...	
Tonsillitis ...	...	3	...	3	...	
Pharyngitis ...	...	41	...	41	4	
<i>Carried forward ...</i>	218	3,508	414	3,726	230	

## Return of Diseases and Deaths in 1913 at the Malacca Hospitals.—Continued.

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward...</i>	218	3,508	414	3,726	230	
DISEASES OF THE DIGESTIVE SYSTEM.— <i>Continued.</i>						
Gastritis ...	...	5	...	5	1	
Dyspepsia ...	...	1	...	1	...	
Gastralgia ...	...	1	...	1	...	
Enteritis ...	...	13	...	13	1	
Appendicitis ...	...	2	...	2	...	
Gastro Enteritis ...	...	1	1	1	...	
Colitis ...	...	3	...	3	2	
Sprue ...	...	1	1	1	...	
Hernia Inguinal ...	...	2	...	2	1	
Obstruction Bowel ...	...	1	1	1	...	
Diarrhœa ...	6	147	65	153	5	
Constipation ...	...	2	...	2	...	
Intestinal Colic ...	...	13	...	13	1	
Ischio Rectal Abscess ...	...	3	...	3	...	
Ulcer Anus ...	1	...	...	1	...	
Abscess Anus ...	...	1	...	1	...	
Fistula in Ano ...	1	2	...	3	...	
Hæmorrhoids ...	...	5	...	5	...	
Cirrhosis Liver ...	2	26	9	28	3	
Abscess ...	...	1	...	1	...	
Congestion ...	...	1	...	1	...	
Jaundice ...	...	1	1	1	...	
Biliary Colic ...	...	1	...	1	...	
Peritonitis ...	...	1	...	1	...	
DISEASES OF THE LYMPHATIC SYSTEM.						
Abscess Spleen ...	...	1	1	1	...	
Lymphadenitis ...	...	17	...	17	...	
Bubo ...	1	22	...	23	2	
DISEASES OF THE URINARY SYSTEM.						
Chronic Nephritis ...	4	73	23	77	12	
Renal Colic ...	...	1	...	1	...	
Cystitis ...	...	4	3	4	...	
DISEASES OF THE GENERATIVE SYSTEM.						
Urethritis ...	...	3	...	3	...	
Stricture Urethra ...	...	2	...	2	...	
Urethral Fistula ...	...	1	...	1	...	
Phimosi ...	...	4	...	4	...	
Paraphimosis ...	...	1	...	1	...	
Balanitis ...	1	5	...	6	1	
Ulcer Penis ...	3	10	...	13	...	
Chancroid Male ...	7	25	...	32	1	
Abscess Scrotum ...	...	1	...	1	...	
Hydrocele ...	...	3	...	3	...	
Hæmatocele ...	...	1	...	1	...	
Orchitis ...	...	3	...	3	...	
Hernia Testis ...	...	4	...	4	...	
Oopharitis ...	...	1	...	1	...	
Ulcer Vulva ...	...	4	...	4	1	
Chancroid Female ...	...	9	...	9	...	
Dysmenorrhœa ...	...	1	...	1	...	
Menorrhagia ...	...	1	...	1	1	
<i>Carried forward ...</i>	244	3,939	519	4,183	262	



*Return of Diseases and Deaths in 1913 at the Malacca Hospitals.—Continued.*

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	244	3,939	519	4,183	262	
AFFECTIONS CONNECTED WITH PREGNANCY.						
Labour Natural ...	...	4	...	4	2	
AFFECTIONS CONNECTED WITH PARTURITION.						
Retention Placenta ...	...	1	...	1	...	
Premature-birth ...	...	3	3	3	...	
AFFECTIONS CONSEQUENT ON PARTURITION.						
Puerperal Sapræmia ...	...	1	1	1	...	
DISEASES OF THE ORGANS OF LOCO- MOTION.						
Periostitis ...	...	1	...	1	...	
Necrosis ...	...	1	...	1	...	
Arthritis ...	2	5	1	7	...	
Synovitis ...	...	9	...	9	1	
Caries Spine ...	2	4	1	6	...	
Myositis ...	...	1	...	1	1	
Lumbago ...	...	1	...	1	1	
Myalgia ...	...	11	...	11	1	
DISEASES OF THE CONNECTIVE TISSUE.						
Cellulitis ...	1	29	5	30	1	
Abscess ...	1	56	2	57	7	
Elephantiasis ...	...	2	...	2	...	
DISEASES OF THE SKIN.						
Urticaria ...	...	1	...	1	...	
Eczema ...	1	29	...	30	3	
Ulcers ...	39	540	...	579	48	
Boils ...	...	6	...	6	...	
Carbuncles ...	...	3	...	3	1	
Gangrene Skin ...	...	1	1	1	...	
Herpeszoster ...	...	4	...	4	...	
DISEASES OF THE NAIL.						
Onychia ...	...	3	...	3	...	
Burns ...	...	9	2	9	...	
INJURIES, GENERAL AND LOCAL.						
Scalds ...	...	7	...	7	...	
Privation ...	...	3	...	3	...	
Contusions ...	1	28	...	29	...	
Abrasions ...	...	6	...	6	...	
Concussion Brain ...	...	1	...	1	1	
Compression ...	...	3	1	3	...	
Fracture Base Skull ...	...	1	1	1	...	
Wounds ...	2	101	...	103	6	
Multiple Injuries ...	1	35	...	36	2	
Sprains ...	...	8	...	8	1	
<i>Carried forward ...</i>	294	4,857	537	5,151	338	

*Return of Diseases and Deaths in 1913 at the Malacca Hospitals.—Concluded.*

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	294	4,857	537	5,151	338	
INJURIES, GENERAL AND LOCAL.— <i>Continued.</i>						
Dislocation Shoulder ...	...	1	...	1	...	
Snake-bite ...	...	3	1	3	...	
Dog-bite ...	...	3	...	3	...	
Panther-bite ...	...	1	...	1	...	
Fracture Ribs c Lac. Lung...	...	1	1	1	...	
" Simple ...	2	12	...	14	2	
" Compound ...	...	1	...	1	...	
Circumcision ...	...	1	...	1	...	
PARASITES.						
Ascaris Lumbricoides ...	...	7	...	7	...	
Ankylostomiasis ...	26	162	28	188	7	
Ringworm ...	1	8	...	9	...	
Scabies ...	8	62	...	70	5	
Tinea Circinata ...	...	2	...	2	...	
Guinea Worm ...	...	1	...	1	...	
Tapeworm ...	...	1	...	1	...	
OBSERVATION ...	7	135	...	142	6	
NO APPRECIABLE DISEASE ...	...	4	...	4	...	
Total ..	338	5,262	567	5,600	358	

## LABUAN.

*Return of the Statistics of Population for the Year 1913.*

				Europeans.	Eurasians.	Malays.	Chinese.	Indians.	Other Nationalities.	TOTAL.
Number of inhabitants in 1913	...			38	25	4,577	1,815	185	66	6,706
„ Births during the year 1913	...			...	6	143	60	4	3	216
„ Deaths „ „ 1913				1	3	87	45	5	3	144
„ Immigrants „ „ 1913				} Not obtainable.						
„ Emigrants „ „ 1913										
Number of inhabitants in 1912	...			39	22	4,521	1,800	186	66	6,634
Increase ...	...	...	...	...	3	56	15	...	...	74
Decrease ...	...	...	...	1	...	...	...	1	...	2

Race or Nationality should be specified, as nearly as possible, in accordance with the above model.

*Meteorological Return for the Year 1913.*

			TEMPERATURE.					RAINFALL.		WINDS.		REMARKS.	
			Solar Maximum.	Minimum on Grass.	Shade Maximum.	Shade Minimum.	Range.	Mean.	Amount in Inches.	Degree of Humidity.	General Direction.		Average Force,
			°F	°F	°F	°F	°F	Ins.	%				
January	...	...	73°0	85°6	76°4	9°2	81°0	4'13	78	N.E.	No instrument for recording.		
February	...	...	71°7	86°1	75°8	10°3	80°9	1'64	81	N.E.			
March	...	...	71°5	87°0	75°9	11°1	81°4	2'51	79	N.E.			
April	...	...	72°5	88°6	76°4	12°2	82°5	4'99	77	S.W.			
May	...	...	72°9	89°0	76°7	12°3	82°8	18'23	78	S.W.			
June	...	...	72°7	88°1	75°5	12°6	81°8	20'46	81	S.W.			
July	...	...	72°8	87°8	76°6	11°2	82°2	9'22	80	S.W.			
August	...	...	73°4	87°3	76°6	10°7	81°9	5'63	78	S.W.			
September	...	...	73°0	87°2	75°2	12°0	81.2	22'99	79	S.W.			
October	...	...	72°9	85°7	74°6	11°1	80°1	21'27	81	S.W.			
November	...	...	73°1	86°5	75°6	10°9	81°0	16'38	79	S.W.			
December	...	...	72°8	86°1	75°7	10°4	80°9	13'85	81	N.B.			
Mean	...	...	72°6	87°0	75°9	11°1	81°4	Total 141'30	79	...	...		



## LABUAN.

*Return of Diseases and Deaths in 1913 at the Labuan Hospital.*

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
INFECTIVE DISEASES.						
Beri-beri ...	I	22	I	23	2	
Chicken-pox ...	...	I	...	I	...	
Dysentery ...	...	4	...	4	...	
Gonorrhœa ...	...	5	...	5	...	
Gonorrhœal Arthritis ...	...	3	...	3	...	
„ Epidydimitis ...	...	I	...	I	...	
Malaria, Benign Tertian ...	I	22	...	23	...	
„ Sub-tertian ...	...	65	3	65	...	
„ Cachexia ...	...	5	...	5	...	
„ Quartan ...	...	2	...	2	...	
Syphilis, Primary ...	...	5	...	5	...	
„ Secondary ...	...	4	...	4	I	
„ Tertiary ...	...	3	...	3	I	
DISEASES OF THE NERVOUS SYSTEM.						
Epilepsy ...	...	I	...	I	...	
Neuritis (Malarial) ...	...	I	...	I	...	
MENTAL DISORDERS.						
Delusional Insanity ...	...	2	...	2	...	
Imbecile ...	...	I	...	I	...	
GENERAL DISEASES NOT INCLUDED IN THE PREVIOUS GROUP:—						
Anæmia ...	...	I	...	I	...	
Debility (General) ...	...	2	...	2	I	
Congenital Malformation ...	...	I	...	I	...	
DISEASES OF THE EYE.						
Conjunctivitis (Granular) ...	...	2	...	2	...	
„ (Phlyctenular) ...	...	I	...	I	...	
Sclero-keratitis ...	...	I	...	I	...	
DISEASES OF THE NOSE.						
Nasal Catarrh ...	...	I	...	I	...	
DISEASES OF THE EAR.						
Inflammation External Ear ...	...	I	...	I	...	
Otorrhœa ...	...	I	...	I	...	
DISEASES OF THE CIRCULATORY SYSTEM.						
Arterio Sclerosis ...	...	I	...	I	...	
Valvular Disease of Heart ...	...	I	...	I	...	
Mitral Regurgitation ...	...	I	...	I	...	
DISEASES OF THE RESPIRATORY SYSTEM.						
Bronchitis and age ...	...	3	I	3	...	
Pulmonary Tuberculosis... ..	I	11	3	12	...	
Pleurisy ...	...	I	...	I	...	
Carried forward ...	3	175	8	178	5	

## Return of Diseases and Deaths in 1913 at the Labuan Hospital—Continued.

DISEASES.	Remain- ing in Hospital at end of 1912.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1913.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	3	175	8	178	5	
DISEASES OF THE DIGESTIVE SYSTEM.						
Constipation ...	...	1	...	1	...	
Diarrhœa ...	...	5	1	5	...	
Mucous Colitis ...	...	1	...	1	...	
DISEASES OF THE LYMPHATIC SYSTEM.						
Bubo (Inguinal) ...	...	1	...	1	...	
Glands, Inflammation ...	1	2	...	3	...	
„ Suppurating ...	1	...	...	1	...	
Lymphangitis ...	...	1	...	1	...	
DISEASES OF THE GENERATIVE SYSTEM.						
Soft Sore ...	...	2	...	2	...	
Paraphimosis ...	...	1	...	1	...	
Abscess (Vulva) ...	...	1	...	1	...	
DISEASES OF THE LOCOMOTIVE SYSTEM.						
Arthritis (Traumatic) ...	...	2	...	2	...	
Osteo Arthritis ...	...	1	...	1	...	
Rheumatism ...	...	2	...	2	...	
Synovitis (knee) ...	...	1	...	1	...	
DISEASES OF THE CONNECTIVE TISSUE.						
Abscess ...	...	8	...	8	...	
„ Post Pharyngeal ...	...	1	...	1	...	
Whitlow ...	...	1	...	1	...	
DISEASES OF THE SKIN.						
Scabies ...	...	5	...	5	...	
Ulcers (Callous) ...	1	...	...	1	...	
„ Septic ...	...	3	...	3	...	
„ Traumatic ...	...	1	...	1	...	
„ Simple ...	...	6	...	6	...	
INJURIES.						
Wounds ...	...	9	...	9	...	
Crocodile-bite ...	...	1	...	1	...	
Fracture Radius and Ulna ...	...	1	...	1	...	
„ Femur ...	...	1	...	1	...	
„ Nasal bone ...	...	1	...	1	...	
„ Skull (compound) ...	...	1	...	1	...	
Stab Wound (stomach) ...	...	1	1	1	...	
PARASITES.						
Round worm ...	...	1	...	1	...	
FOR OBSERVATION ...	...	5	...	5	...	
Total ...	6	242	10	248	5	

*List of Operations done at the Civil Hospital, Labuan, during the  
year 1913.*

DISEASES.	YEARLY TOTAL.	Total Cases Treated.	REMARKS.
	Admis- sions.		
OPERATIONS.			
ON MEMBRANE OF THR BRAIN.			
Paracentesis ... ..	I	I	
ON ABDOMEN.			
Laparotomy ... ..	I	* I	
ON GLANDS.			
Excision Femoral glands ... ..	I	I	
Excision Inguinal glands ... ..	I	I	
ON THE ORGANS OF GENERATION.			
Incision for Paraphimosis ... ..	I	I	
Circumcision ... ..	I	I	
Plastic Operation Wound of Scrotum ... ..	I	I	
ON NECK.			
Excision Post Pharyngeal Abscess ... ..	I	I	
ON EXTREMITIES.			
Amputation Fore-arm ... ..	I	I	
ON JOINTS.			
Incision and Drainage knee joint ... ..	I	I	
ON CONNECTIVE TISSUE.			
Incision Abscess ... ..	I	I	
Total ...	11	11	

\* Penetrating stabwound Stomach.



